

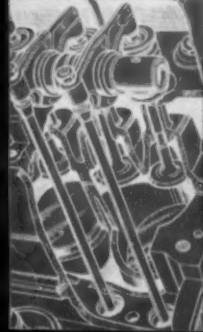
MOTOR AGE

A CHILTON PUBLICATION

NOVEMBER 1960



TRUCK HIGHLIGHTS FOR 1961





PERFECT CIRCLE
PISTON RINGS ARE
BUILT TO TAKE IT

PATTERNS OF PRESSURE

Every size and type of Perfect Circle ring is designed to have the correct radial pressure distribution for the type of engine in which it is to be used.

Processes and equipment are carefully developed, through the use of precision gauges, to produce the exact pressure required. Radial pressure is accurately measured at 17 points around the ring and the measurements are then graphically plotted.

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ANOTHER BLUE STREAK
SECRET SERVICE TIP FOR YOU.

SHERLOCK McKANICK and MIKE

"THE CASE OF THE BOOKLET
AND THE BEATNIK!"

SHERLOCK, MEET MY
BROTHER JULIUS. I'M TEACHING
HIM HOW TO INSTALL POINTS.
(SAY HELLO TO MR. McKANICK!)

MAN, I
DIG YOUR
CO-PILOT
TH' MOST!

MY
WORD!

WE'VE BEEN
FOLLOWING THE
INSTRUCTIONS IN
YOUR LATEST BOOK,
"TUNE UP FOR
PROFIT."

SPLendid! I HOPE
YOU'RE ADVISING JULIUS
TO ALIGN THE CONTACT
SURFACES PROPERLY. VERY
IMPORTANT TO PREVENT
UNEVEN WEAR AND LENGTHEN
POINT LIFE.

YEAH-H!
GOTTA KEEP 'EM
SQUARE MAN!
LIKE ON PAGE
SIX!

misalignment
of point faces



CONTACT
AREA
NOT
CENTERED

misalignment
of centers



CONTACT
AREA
NOT
CENTERED

correct
alignment



CONTACT
AREA
CENTERED

YES, THIS IS WHAT WE
FOLLOWED: "IF POINTS NEED
RE-ALIGNMENT, MAKE SURE
IT'S THE STATIONARY ARM
YOU BEND, NOT THE MOVABLE
ONE WHICH HAS LESS STRUCTURAL
STRENGTH AND MAY BE
SERIOUSLY WEAKENED BY
BENDING..."

YOU'VE
DONE
IT, BY
GEORGE!

THIS
BOOKLET
MAKES IT
EASY...
AND THE
NAME IS
JULIUS
MAN!

MECHANICS: GET "TUNE UP FOR PROFIT"
...SHERLOCK'S GUIDE TO IGNITION SYSTEM
SERVICING. IT'S A CLEAR, 12-PAGE EXPLANATION
OF HOW TO SERVICE THE BATTERY, COIL, POINTS,
DISTRIBUTOR AND
REGULATOR. NOW
IT'S YOURS **FREE!**
(USUALLY SELLS FOR \$1.00)
MAIL THIS COUPON
TODAY!

MISS
WATSON
IS IN THE
BOOK, TOO.
LIKE WOW!

YOU SURE
KNOW YOUR
POINTS,
SHERLOCK!

NO WONDER 42,000
REGISTERED DEALERS
SAY **BLUE STREAK**
IGNITION IS BETTER FOR
YOUR BUSINESS!

A-11

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**for automatic
transmissions**



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Thompson Ramo Wooldridge Inc.
Cleveland 3, Ohio

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to borrow my

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GRIP SCREWDRIVER**



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It's got a precision cross-ground point . . . a bolstered blade of high grade, hardened alloy tool steel . . . winged shank for extra strength . . . is hammer and shockproof . . . and oil, brake fluid, gas or dirt don't hurt the Neoprene handle.

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NOVEMBER 1960

Volume 79, No. 12

IN THIS ISSUE

NEWS

Newscoop	33
News about New Products—New Products Shopping Center	63

ARTICLES

Truck Highlights for 1961—begins on	38
Tips on Alternator Service	43
Spotting System Leaks Electronically	46
Winterizing Check-ups Spur Sales & Service	48
For Longer Valve Life Check the Old Ones	50
Photographs Help Body Shop Volume	54
Independent Garage Owners of America in Action	56
What to Do When You Run Into Trouble (BEARINGS)	58
Ford Ignition Timing (Chilton Automotive Manuals Page)	95

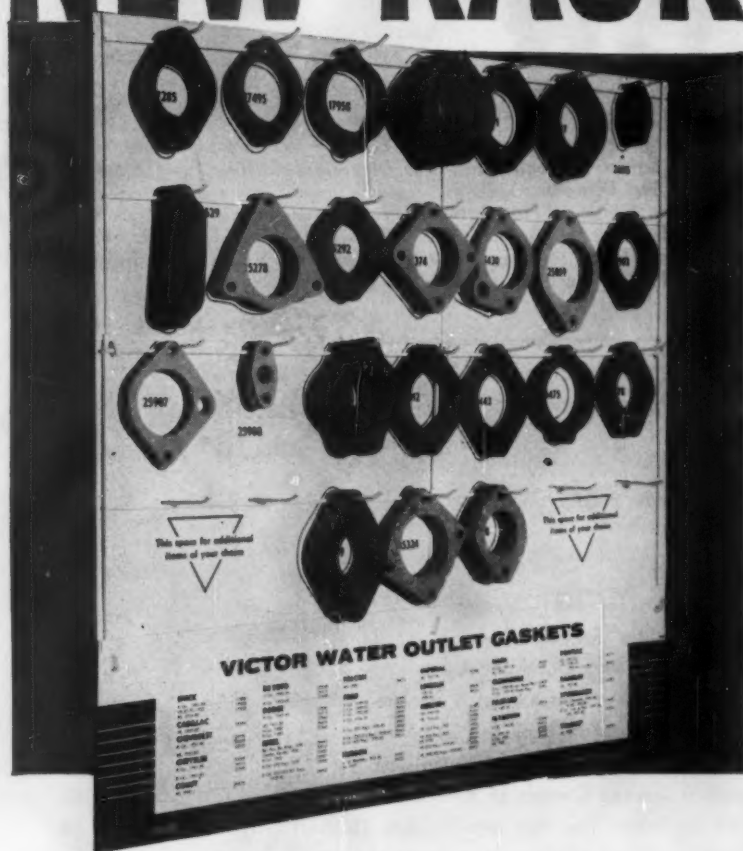
DEPARTMENTS

Editorial Comment Page	37
New Car Registrations Table	59
Tune-up and Alignment Specifications	60
Readers' Clearing House (Troubleshooting Problems)	61
Current Price, Weight and Body Table	62
Shop Kinks for Cars and Trucks	64
Tips for the Body Shop	70
New Literature Information	80
Calendar of Coming Events	82
Advertisers' Index	111
Last Laff	112



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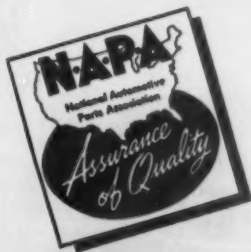
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Insure your service work and your profits. Tell your supplier to make 'em Vision-Aid Headlamps with Spotlight Low Beams. Automotive Products Division, Tung-Sol Electric Inc., Newark 4, New Jersey.



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in most areas. See
local listing for time.

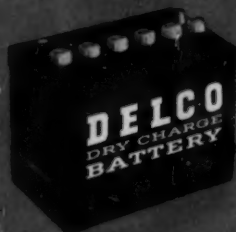


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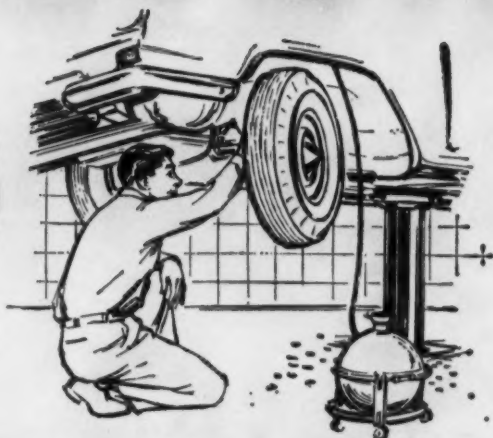
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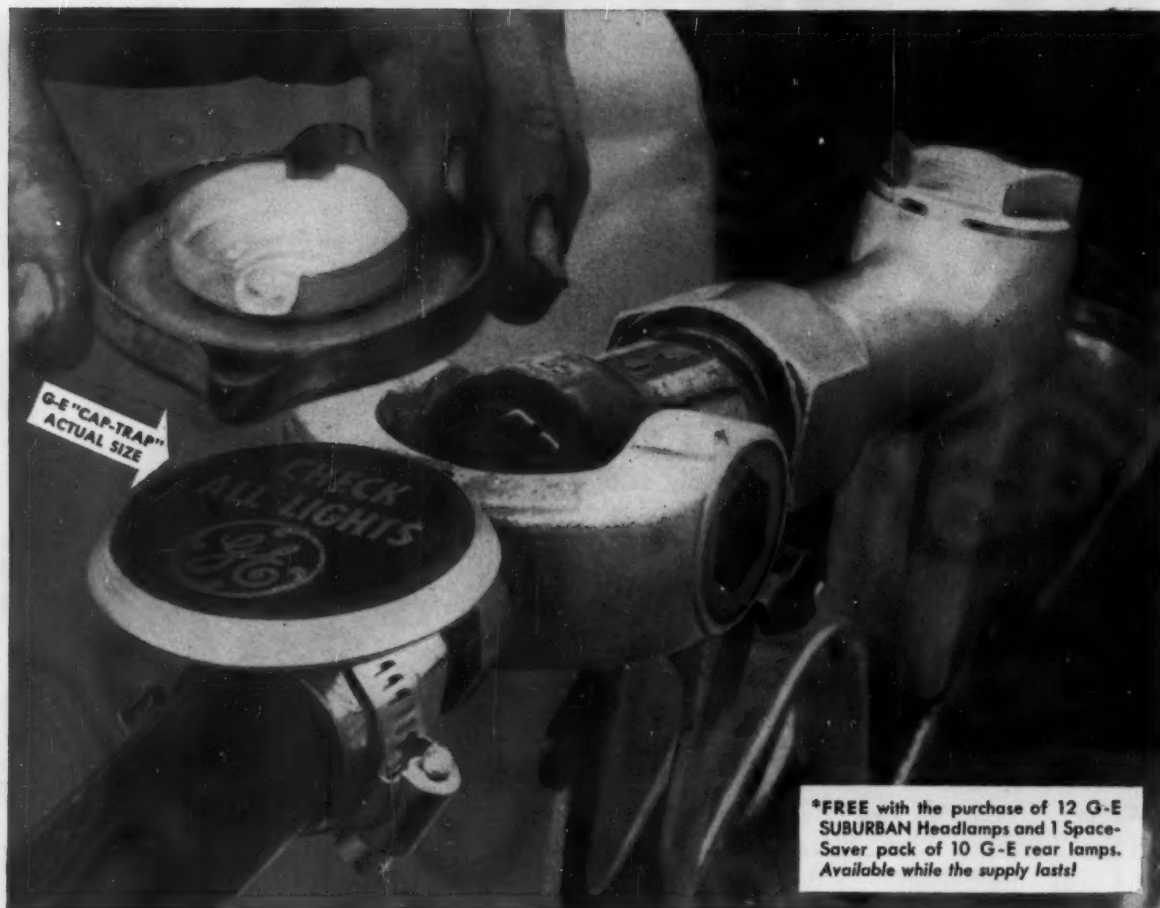
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WFB-2

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- ★ FITS FLAT... WON'T CATCH ON LICENSE PLATE
- ★ HAS WITTEK "SURE-TITE" CLAMP

A lost gas cap can cost you anything from a few dollars—to a few customers. But a G-E "Cap-Trap" can eliminate these losses. It keeps gas caps handy, and in the same place every time. You save steps and money. You pay nothing extra for the G-E "Cap-Trap"—and it doesn't come out of your profits! It's free with a purchase of 12 G-E SUBURBAN Headlamps and 10 G-E rear lamps. Ask your General Electric Headlamp supplier about a "Cap-Trap" today.

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GENERAL  ELECTRIC

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rips off old waxes and greases...gives undercoats a bulldog grip

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• Although strong enough to dissolve wax and dirt, DITZ-O will not soften old or new paint film. And you can safely use it with primer-surfacer as it will not lift feather-edge or cause wrinkling at moldings.

• DITZ-O has no unpleasant odor. It's easy on the hands. You'll like its economy, too, as it goes farther than other solvents.



To remove stubborn silicone particles use SILICON-OFF

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Ditzler Color Division, Pittsburgh Plate Glass Company • Detroit 4, Mich. • Torrance, Calif.

DITZLER®

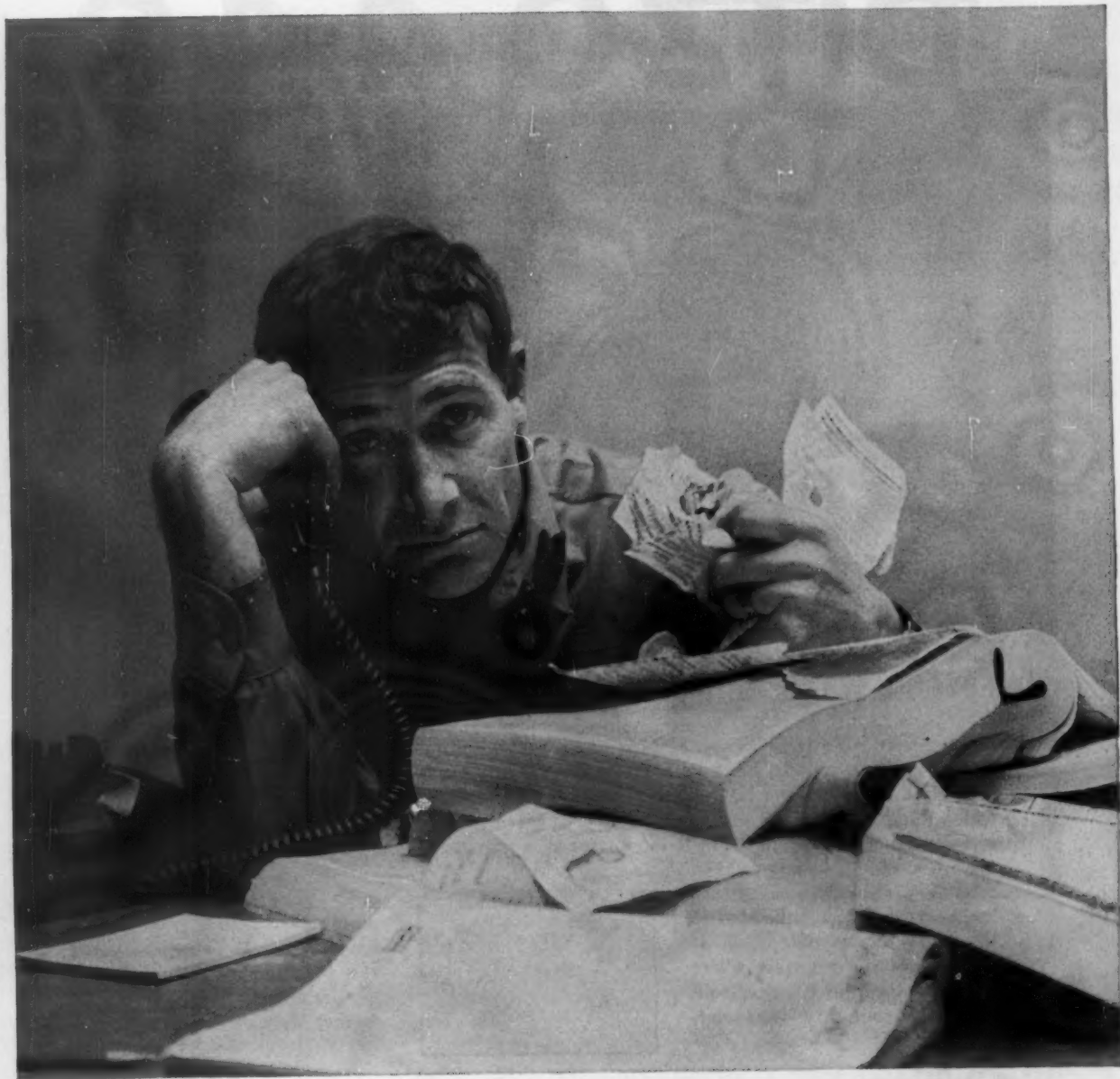
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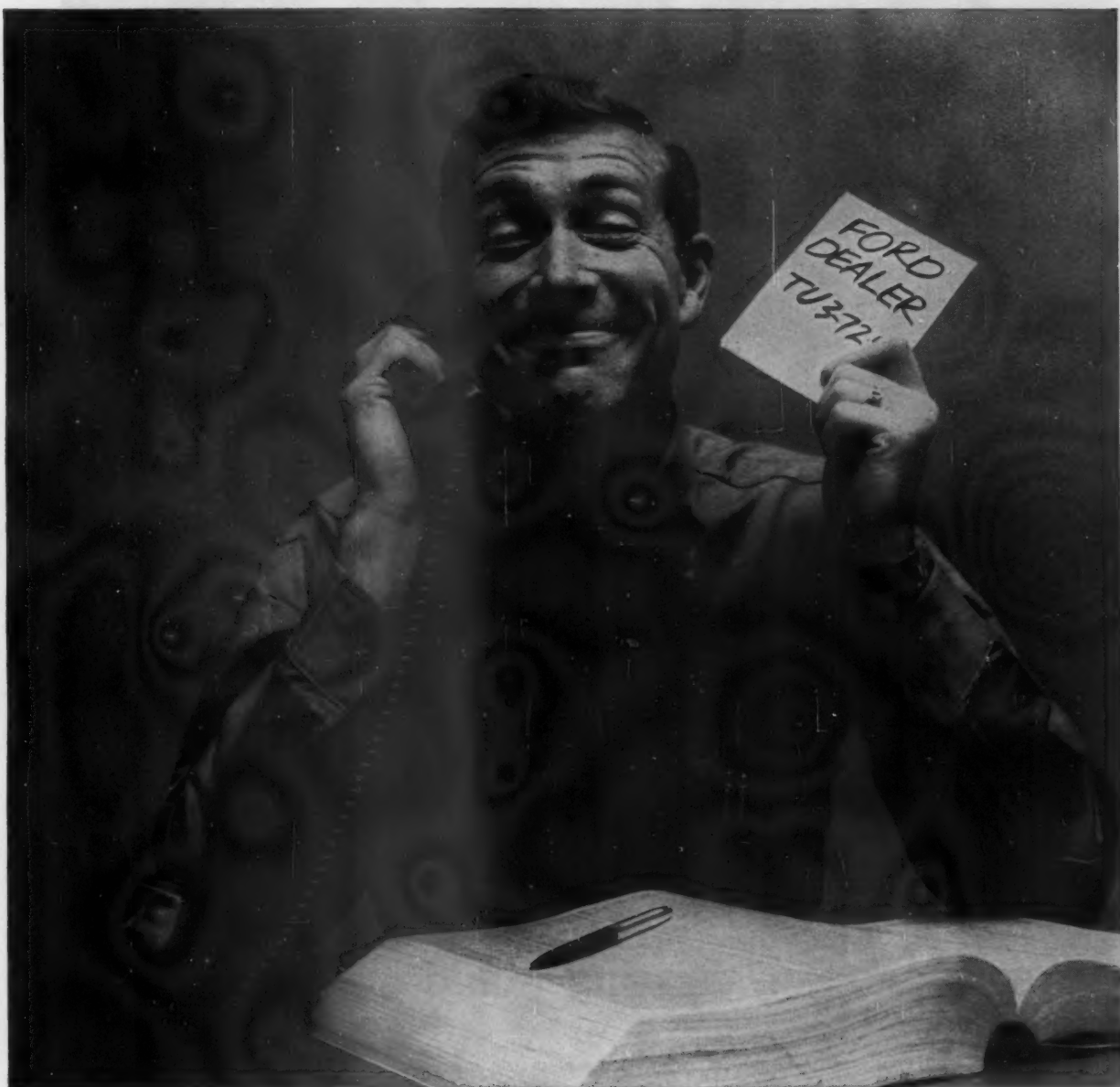
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Dealer is anxious and able to serve you. Give him a ring!

So, get the parts that are made right . . . to fit right . . . and last longer. A phone call will quickly prove to you that your Ford Dealer is in a favorable position to offer them at *supermarket prices*! Try it.

P.S. Don't forget that Ford Super Quality is now available in universal parts for different-make cars and trucks.



**MONMOUTH
QUALITY
IN ACTION**



"Years ago, any bearing would do the job..."

... but in today's modern, high compression engines you've got to use the best. That's why I rely on Monmouth. After 41 years in the business, I know that Monmouth's trouble-free performance means satisfied customers."

says R. E. Lucas, Owner
Broadus & Lucas
Richmond, Virginia

If you want performance that pays off, use Monmouth Bearings in all of your engine rebuilds. For instant service, call on your NAPA jobber. He carries the complete Monmouth line to meet all of your engine bearing requirements.

Low premium "customer insurance" is yours when you install . . .

MONMOUTH Engine Bearings

CLEVITE SERVICE: Cleveland Graphite Bronze • Division of Clevite Corporation • Cleveland 3, Ohio



HIGHEST SILICONE CONTENT

Stops Squeaks!



In 12 oz. spray cans
2 oz. and 8 oz. tubes

Dow Corning 4X SILICONE

LUBRICATES • PRESERVES • INSULATES

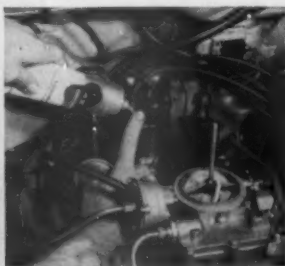
*Recommended By Leading Auto Makers
... For Finer Garage Service*

Silicone-rich 4X guards weatherstripping, wiring, batteries, and rubber parts against heat, cold, moisture, weathering and corrosion. It stops squeaking and sticking of rubber to metal; aids electrical performance; keeps locks and antenna working smoothly. All of this means that Dow Corning 4X makes car owners happier ... with your service!



KEEPS LOCKS TROUBLE FREE

4X lubricates locks, keyholes, radio antenna. Prevents freezing and corrosion. Never gums or runs. Excellent for window channels, too.



PROTECTS IGNITION SYSTEMS

Keeps moisture out of plugs, wiring, distributor, magneto. Eliminates electrical leakage. Aids engine performance—helps prevent misfires.



PROLONGS BATTERY LIFE

Minimizes corrosion build-up on cables, case, terminals; prevents power loss. Helps assure quick starts—maximum battery life. Eases cleaning.



STOPS SQUEAKS AND STICKING

Preserves weatherstripping around doors, trunks, hoods, windows. Keeps it flexible, stick-proof. Helps preserve rubber mounts and fan belts for more dependable service.

NONMELTING, NONFREEZING, NONGUMMING... FROM -40° TO 400° F.

There's no substitute for SILICONES for better car care ... and Dow Corning 4X is highest in silicone content! Order from your jobber now!



Dow Corning CORPORATION
MIDLAND, MICHIGAN

ATLANTA BOSTON CHICAGO CLEVELAND DALLAS LOS ANGELES NEW YORK WASHINGTON, D. C.



ALL THE THRILLS AND SPILLS OF THE BIG TRACKS!

This exciting, realistic game includes 10 sections of curved roadway, 2 sections of straight roadway, 2 powered racing cars, 8-piece ramp set, and transformer.

Get It Now for Christmas Giving!



AUTOLITE STOCK CAR RACING GAME

Manufactured by American Flyer especially for Autolite! This electric, remote-controlled racing game (\$34.98 value) can be yours when you purchase Autolite Spark Plugs.

Watch the kids' faces light up when they discover this realistic, all-electric racing game under the Christmas tree. There's nothing like it anywhere that provides as much fun and excitement as this spine-tingling racing game now offered by Autolite. It duplicates the spills and chills of real racing . . . with authentic-looking hot rods . . . with figure-8 grooveless track that gives each player an equal chance to win . . . with remote dual control transformer to make the cars go. It's a wonderful gift . . . one that's easy to get now and lay away for Christmas! Don't delay. Your Autolite Spark Plug Wholesaler has all the money-saving details. Call him today!

THE ELECTRIC AUTOLITE COMPANY, TOLEDO 1, OHIO



**YOUR
AUTOLITE
WHOLESALE
HAS FULL
DETAILS**



AUTOLITE® SPARK PLUGS

PROVED IN COMPETITION FOR ALL CARS

BE SURE TO TUNE IN "NEWS ON THE HOUR" NBC RADIO—SPONSORED BY AUTOLITE

1st choice
in the
Ryder System*
MODEL SHOP



...and in more shops throughout
the country than all others combined...

*Ryder System of Miami, Fla. is made up of a large motor common carrier operation and a vast national rental and leasing network. It owns close to 25,000 vehicles. The Miami Model Shop is the first experimental model shop of its kind in the country. It is designed and engineered to test new equipment and techniques to achieve maximum results with a minimum of lost motion.

SIOUX VALVE GRINDING EQUIPMENT

"Choose with Confidence!"

Look for SIOUX in the yellow pages under "Tools, Electric" or write to

ALBERTSON & CO., INC.

SIOUX CITY, IOWA, U. S. A.



Air Impact Wrenches • Air Screwdrivers • Electric Impact Wrenches • Drills • Screwdrivers • Grinders
• Sanders • Polishers • Flexible Shafts • Portable Saws • Valve Grinding Machines • Abrasive Discs.



There's nothing like
a new car!

LIKE A
THERE'S
NOTHING
NEW CAR!



THERE'S
NOTHING
LIKE
A
NEW CAR!



Everybody's talking about the new cars, everybody's thinking about the new cars! And once again, "There's Nothing Like a New Car" is the theme of a big, colorful advertising campaign to stimulate customer traffic at General Motors dealers. The ads are designed to help funnel today's ever-growing mountain of disposable income straight into *your* dealership, to convince the millions of readers that they haven't lived until they've driven a new '61 GM car. Read the ads yourself. Note the fun and excitement, and the common-sense sales appeal of GM's performance, reliability and big selection. *It's great to be a GM dealer!* . . . **GENERAL MOTORS**



There
is
Only



me

Aero-Seal **JET**

WORM DRIVE HOSE CLAMP



An original product design will always be copied, but the genuine article keeps the confidence of the user by dependability. AERO-SEALS laugh at vibration and corrosion... hang on tightly... never shake loose or snap open. And they won't damage hose. Bands and housings are of 302-18-8 stainless steel. No extra cost for quick-attach Jets. Regular AERO-SEALS are also available.

Complete range of sizes from 7/16" up.



BREEZE CORPORATIONS, INC.

700 Liberty Avenue, Union, New Jersey Cable Address: Breeze, Union, N. J.

DIRT-SEALED trigger



**ELECTRIC
IMPACTTOOL**
Size 2U, 3/8" Drive

Plunger-operated instead of conventional swinging lever switch, and sealed tight from dust and dirt . . . another exclusive I-R feature which assures you long, trouble-free operation and easy maintenance. Look for these red ● ball extras before you buy!

another red ● ball extra

● **Easy-Out Replaceable Bushing.** You don't have to buy a new hammer case when you want to replace the bushing on an I-R Impacttool.

● **Life Guard Commutator.** Exclusive I-R construction prevents motor damage, permits easy dressing, provides long brush life.

● **Job-Tailored Motor.** Not "adapted" but built specifically for rugged Impacttool duty.

● **"2-Pack" Construction.** Either the impact mechanism "pack" or the motor "pack" can be serviced individually without disturbing the other.

● **Electronic Precision.** Special electronic equipment double-checks machined parts for perfect mating of all surfaces and bores.

*best design—biggest line
look for the red ● ball extras*

Ingersoll-Rand

11 Broadway, New York 4, N. Y.

56A-18

How long does it change a set

If you haven't checked lately, you're in for a surprise!

- Starting with '58 models, plugs are much easier to reach
- More and more of your customers are driving "quick change" sixes
- Champion's Plug-Master wrench slashes time on "tough jobs"

LESS TIME MEANS MORE PROFIT

You'd be surprised how much more profitable spark plug jobs are these days. One reason is that, since 1958, manufacturers have been designing engines so that plugs are easier to reach. For example, before 1958, Ford V-8's had spark plugs *under* the manifold. This job took approximately 30 to 35 minutes. Since '58, spark plugs have been *above* the manifold on many engines — and the job can be done in 24 minutes or less.



Ford V-8 with plugs under manifold requires 30 to 35 minutes for change



Newer models, with plugs above manifold, take only 20 to 25 minutes

Your profit on 8 plugs (at 45¢ per plug) is \$3.60. If the job takes only 24 minutes, this is

equal to an hourly rate of \$9.00! And that does not even include any installation charge to the customer. (The times shown here are averages — using a Champion Plug-Master wrench and Plug-Mate socket — and can easily be improved upon with a little practice.)

And "times have changed" for other new V-8's, too. (Chryslers, for example, now require only a half hour or less for plug changes, instead of the pre-1958 time of 40 to 50 minutes!)

MORE COMPACTS AND "QUICK CHANGE" SIXES ON THE ROAD TODAY

Of course, spark plug changing is even easier and faster on 6-cylinder engines — averaging only *about 15 minutes* per job. And there are more and more 6-cylinder cars being sold every day. 40% of 1960 U.S. production was in sixes. And the growing popularity of compacts promises to raise this figure even higher for 1961.



It takes about a quarter of an hour to change plugs in any 6-cylinder car—a quick, easy profit

CHAMPION SPARK PLUG

Chilton's MOTOR AGE • November 1960

really take to of spark plugs?

PLUG-MASTER AND PLUG-MATE SLASH TIME ON ALL PLUG JOBS

You can change even the hardest-to-reach plugs easily with the time-and-trouble-saving team of Champion's Plug-Master wrench and Plug-Mate socket. The Plug-Master's flex-handle saves time and knuckles as it gets into hard-to-reach places, while the Plug-Mate's magnetic socket holds plugs in a firm grip that doesn't let them drop and break.



Low-cost Plug-Master and Plug-Mate available from your regular Champion supplier



AND YOU CAN NOW CHECK PLUGS FASTER, TOO—WITH A CHAMPION PLUG-SCOPE



Champion Plug-Scope makes spark plug checking as easy as watching TV

The Champion Plug-Scope is the fastest, easiest way ever to check spark plugs. You can check a whole set *electronically*—right in the engine—in less than 60 seconds!

And, best of all, your customers can see test results for themselves on the Plug-Scope—a real sales clincher for you! Ask your Champion representative or supplier for a free Plug-Scope demonstration—and see how easy plug checking can be!

With spark plugs easier to reach in new engines, and Champion tools that speed up the job, plug changing is now more profitable than ever before. Order a supply of Champion spark plugs, and see for yourself!

DEPENDABLE
CHAMPION
SPARK PLUGS



COMPANY • TOLEDO 1, OHIO

Chilton's MOTOR AGE • November 1960

Stop Ring Plugging Worries

with Pedrick

Formflex Chrome

Piston Rings

Protect and build your reputation for the most successful piston-ring and engine-overhaul jobs by guarding against ring plugging. Always use Pedrick Formflex Chrome oil rings. Pedrick's exclusive 4-piece construction gives you the greatest assurance that any tendency to plug will be broken up at the start. All *four* pieces are free to move independent of each other in the groove. Each one fights against plugging. In abutment-type oil rings, only Pedrick has such effective means to stop plugging.

Reproduction of unretouched photograph of piston after normal life's service in an engine—showing free and open condition of Pedrick Formflex Chrome Oil Ring.

In addition, PEDRICK FORMFLEX CHROME PISTON RINGS are:

- Easy to install!
- Effective in Side Sealing!
- More conformable!
- All-Purpose—for any kind of service!
- Chrome-faced for longer life!

DEPEND ON

Pedrick

FOR THE BEST RING JOB

MEMA Announces "Key" Committee Plan To Aid Industry



By Thomas S. Rose

President of the Motor and Equipment Manufacturers Association and Assistant Treasurer, Sealed Air Corp.

CHANGES in the automotive aftermarket are normal at any time. But they have greatly accelerated in recent years to alter this market in which members of the MEMA have a mutual and abiding interest. I believe it is vitally important for all of us to participate in a critical reappraisal of that market.

Call Your Attention

It is scarcely necessary to call to your attention that conditions in our industry to which I refer. Loose distributive practices, in-

adequate legislative controls in some areas, and over-restrictive ones in others, loss of contact between manufacturer and customer, the growing lack of skilled mechanics to deal with today's more complicated cars—these are but a few of the symptoms of the change in the aftermarket which we regard as occasions for general concern.

Take Remedial Action

To the extent that these symptoms represent changes in the tempo of our times, it is up to us to understand them. We must accommodate ourselves to them. To the extent that they represent a challenge to the continued growth and well being of the industry, we must get at their source and take whatever remedial action is required.

After consulting with my fellow officers and the executive staff of MEMA, I am happy to tell you that we have decided on a course

of action which, in our opinion, will go far toward returning the aftermarket to the stability which it has traditionally enjoyed for so many of its years.

Briefly, our plan calls for the establishment of "key" committees, one for each area of the aftermarket which calls for analysis and effort. Each of these committees will be responsible to MEMA membership through a central "coordinating committee"—each will be charged with the development and implementation of program designed to clarify and improve the situation as they find it.

Meet the Challenge

For more than fifty years the MEMA has contributed to the progress of the automotive aftermarket. I am convinced that its members will meet the challenge of today's critical conditions actively, effectively, and constructively.

Welding's role in

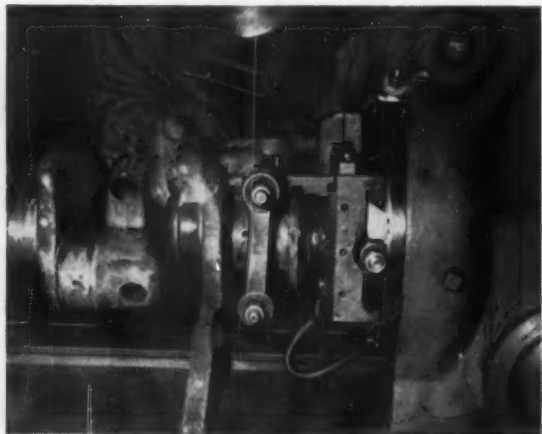


Operator inspecting nearly completed weld build-up.

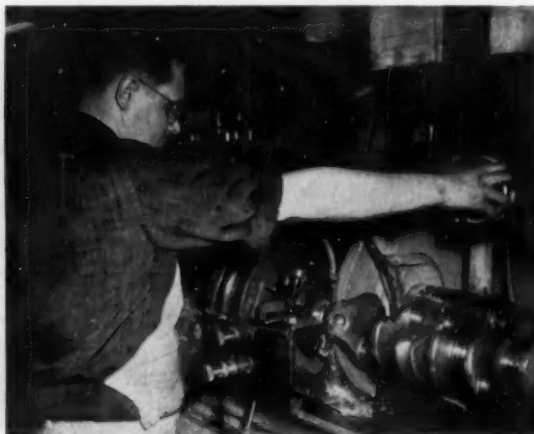
RISING costs of reconditioning expensive parts are causing unit rebuilders to search for more economical means of performing these tasks. Crankshafts are a good example of a rebuilt-exchange unit. Of course, there are many other items being reclaimed in the replacement field. However, crankshafts seem to be among the most dominant.

Although new cars are equipped with new crankshafts, almost all replacement crankshafts are rebuilt exchanges.

Closeup shows arc welding build-up of worn journal.



Grinding built-up journal down to desired tolerance.



Crankshaft Rebuilding

Discussion of a faster build-up method as presently being used by a Los Angeles firm

Worn bearing surfaces are built-up oversize; then ground down to the desired tolerance. In the past, the build-up has been accomplished primarily by a metal spray process using the oxy-acetylene flame to melt a special wire. This in turn is blown onto the metal shaft surface by compressed air.

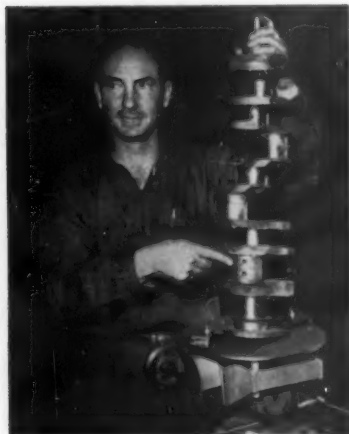
Today, a faster method of crankshaft build-up has been introduced in Southern California by Absco, Inc. The firm is a progressive welding supply distrib-

utor in Los Angeles. Various welding processes have been tried for this particular application. But it was not until the advent of Sigma short arc welding that a new means of crankshaft build-up was found.

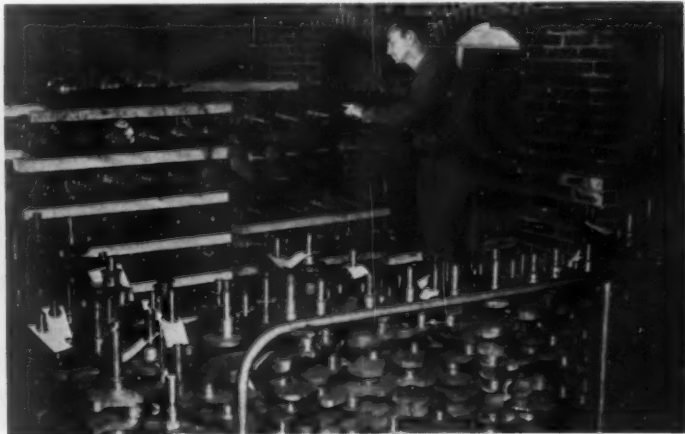
Short arc welding is a "low heat input" metal inert gas fusion welding process which produces very sound weld metal. All of these features are valuable when the process is applied to crankshaft rebuilding. It deposits a steel bond on the shaft which is

equal to the shaft in density. In fact, the alloy of the shaft mixes with that of the welding wire to form a homogenous deposit. The deposit blends perfectly with the original metal. The machined surface appears to be original metal throughout. All or part of the worn bearing surfaces can be rebuilt into a full fusion weld, which eliminates any tendency to chip or loosen. The low heat of the process minimizes distortion.

Journal is ready for grinding.



Plant superintendent checking newly rebuilt crankshafts.



THE PULSE

OF

AUTOMOTIVE BUSINESS

Automotive Wholesaler's Sales and Inventories

Data from the Bureau of the Census, Dept. of Commerce

Region	Per Cent Change in				
	Sales	Inventories			
	Aug. 1960 from Aug. 1959	Aug. 1960 from July 1960	8 Mos. 1960 from 8 Mos. 1959	Aug. 1960 from Aug. 1959	Aug. 1960 from July 1960
New England.....	+10	+16	+8	..	+2
Middle Atlantic.....	+11	+17	+4	-1	-2
East North Central.....	+9	+9	+7	+16	-2
West North Central.....	+9	+16	+1	+7	-4
South Atlantic.....	+17	+9	+3	+6	0
East South Central.....	+5	+6	+2	+7	0
West South Central.....	0	+4	-3	+4	-4
Mountain.....	+6	+5	-6	+8	-3
Pacific.....	+5	+7	+5	-2	+2
United States.....	+18	+11	+11	+9	-1

Monthly Sales of Automotive Jobbers incl., Tire and Tube Wholesalers*

All Data are in Millions of Dollars

Month	1960	1959	Per Cent Change
Jan.....	\$ 374	\$ 352	+ 6.15
Feb.....	383	333	+15.01
Mar.....	418	375	+ 9.87
Apr.....	449	392	+14.54
May.....	443	389	+13.88
June.....	469	429	+ 9.32
July.....	427	419	+ 1.91
Aug.....	476	405	+17.53
Sept.....	...	425	...
Oct.....	...	439	...
Nov.....	...	429	...
Dec.....	...	379	...
Total—Year.....	...	\$4,769	...
Total—8 Months.....	\$3,439	\$3,094	+11.15

* Estimated by the Bureau of the Census.

Monthly Sales of Franchised Car Dealers*

All Data are in Millions of Dollars

Month	1960	1959	Per Cent Change
Jan.....	\$ 2,577	\$ 2,531	+ 1.81
Feb.....	2,670	2,450	+ 8.96
Mar.....	3,033	2,921	+ 4.00
Apr.....	3,120	2,492	+25.20
May.....	3,054	3,033	+ 0.69
June.....	3,075	3,196	- 3.85
July.....	2,467	2,903	-15.02
Aug.....	2,604	2,772	- 6.06
Sept.....	...	2,305	...
Oct.....	...	2,956	...
Nov.....	...	2,294	...
Dec.....	...	2,177	...
Total—Year.....	...	\$32,472	...
Total—8 Months.....	\$22,605	\$22,750	- 0.64

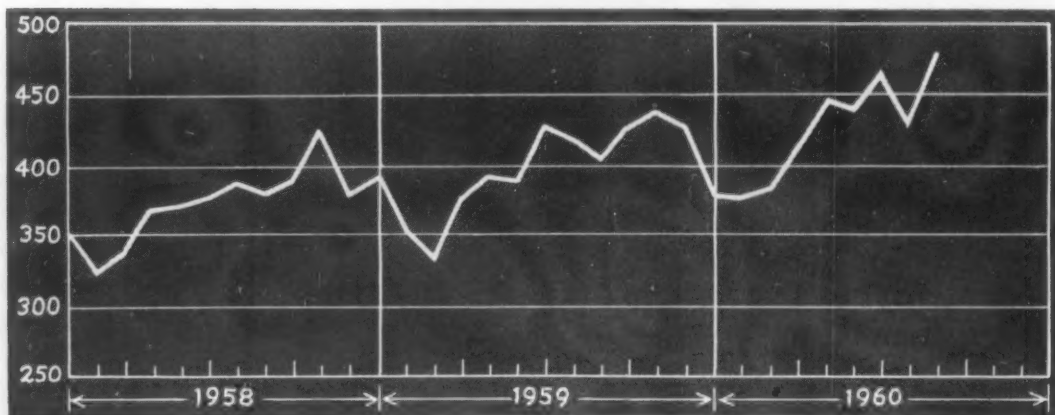
Monthly Sales of Gasoline Service Stations*

All Data are in Millions of Dollars

Month	1960	1959	Per Cent Change
Jan.....	\$ 1,356	\$ 1,282	+5.77
Feb.....	1,286	1,197	+7.66
Mar.....	1,368	1,318	+4.65
Apr.....	1,457	1,348	+8.09
May.....	1,489	1,427	+4.34
June.....	1,525	1,450	+5.17
July.....	1,567	1,516	+4.66
Aug.....	1,575	1,504	+4.92
Sept.....	...	1,419	...
Oct.....	...	1,462	...
Nov.....	...	1,433	...
Dec.....	...	1,437	...
Total—Year.....	...	\$16,793	...
Total—8 Months.....	\$11,666	\$11,042	+5.65

MONTHLY SALES OF AUTOMOTIVE WHOLESALERS— INCLUDING TIRE AND TUBE WHOLESALERS

(All Data in Millions of Dollars)





Miss Autolite (Miss Suzy Smith) is, above, being crowned by TV Celebrity Dave Garraway. Over 100,000 votes were cast by Autolite spark plug dealers across the nation to select Suzy from 12 beauty-queen finalists.

Lee Motor Products Makes Acquisition

Lee Motor Products, Inc., Warehouse Distributor in Cleveland, Ohio, have purchased the business and facilities of Akron Warehouse Distributors, Inc., Akron, Ohio. A separate corporation, the new organization will be known as Lee Motor Products of Akron, Inc.

James E. Beason, who had been president of Akron Warehouse Distributors, will remain in the capacity of president and general manager of Lee Motor Products of Akron, Inc.

General Trading Sold To Gould-National

David E. Bright, chairman of the board of H & B American Corporation of Los Angeles announced the sale of General Trading Company, a 99.3 per cent H & B owned subsidiary, to Gould-National Batteries, Inc., of St. Paul, Minn.

General Trading, also with headquarters in St. Paul, is a wholesale distributor of automotive and industrial supplies and agricultural equipment. It operates 43 distribution centers in the six north central states.

ASIA Suggests Form For Redistribution Reports

According to J. L. Wiggins, Executive Secretary of the Automotive Service Industry Association, one of the major problems in the field of redistribution has been the lack of uniformity. Also a problem has been the need for simplification of reporting forms required by manufacturers for approving functional compensation payments in connection with redistribution sales.

A.S.I.A. through its Redistribution Practices Subcommittee, has been studying this particular problem. It has viewed the problem from the standpoint of eliminating undue hardship in reporting on the part of redistributors while, at the same time, providing essential information for manufacturers utilizing this channel of distribution.

A suggested reporting form was carefully reviewed by manufacturer, warehouse distributor, redistributing wholesaler and wholesaler (jobber) member of the A.S.I.A. Marketing Research Committee and Board of Directors at their recent meetings. It was unanimously approved.



Earl Nightingale (left) presents the first recording of "HOW TO REALIZE YOUR AMBITIONS IN THE AMAZING AUTOMOTIVE SERVICE INDUSTRY" to J. L. Wiggins (right), Executive Secretary of A.S.I.A. This LP (30 minute) recording by Columbia Records was especially written and produced for the Automotive Service Industry Association by Mr. Nightingale.

Although the suggested form "may not meet all requirements of every firm, it is recommended that the 8½" x 11" format size in quadruplicate snap-out type form, and similar certification, be generally adopted by the industry," states Mr. Wiggins.



Bendix Corp. engineers and California Highway Patrol officials cluster around one of the brake units used in a recent special braking demonstration at the Calif. Highway Patrol Academy. A tractor-trailer laboratory designed and operated by Bendix Corp.'s Products division participated in the heavy duty brake tests.



1961 Pacific Automotive Show officers, seated left to right: Harold Littrell, 1st vice pres.; J. K. Wilkinson, president; William D. Henderson, 2nd vice pres. Standing, left to right: Andrew D. Shaw, treas.; and S. B. Sturtevant, secretary.

Robert Abbott

Robert Abbott, recent Raybestos-Manhattan director and president and general manager of Raybestos-Manhattan (Canada), Ltd. of Peterborough, Ont. died October 9 at his home in Peterborough.

Mr. Abbott started with the Raybestos Company, now the Raybestos Division, in Bridgeport, Conn., in 1918. He helped organize the Canadian plant in 1920 and became its first manager.

Mr. Abbott retired in January 1956 and continued to live in Canada.

W. L. Tomlinson

W. L. Tomlinson, manager of automotive sales for the Glass Division of Pittsburgh Plate Glass Co., died suddenly in Detroit from a heart attack on Sept. 30.

Mr. Tomlinson, age 53, had served as manager of automotive glass sales since 1950. He was widely known in the automobile industry.

He joined Pittsburgh Plate Glass in 1928 at its Detroit branch where he later served for seven years as Detroit district manager of industrial glass sales.

Thermoid Offices

The Thermoid Division Offices are now located in the H. K. Porter Building in downtown Pittsburgh.

The Industrial and Automotive management are now consolidated in one office rather than separated as previously with one in Philadelphia and the other in Trenton, N.J.

A Clarification

In last month's article on the history of the Automotive Advertisers' Council we noted that C. C. Tapscott was the first president of the Council.

"Chuck" Tapscott, former advertising manager for McQuay-Norris Mfg. Co.—the position held today by Noble Hale—joined MOTOR AGE as an editorial consultant following his retirement from McQuay-Norris.

PAS Presents 1961 IASI Show

Automotive Service Industry manufacturers and wholesalers are preparing for the 1961 International Automotive Service Industries Show in Los Angeles. Presenting this "manufacturer-through - wholesaler - to - retailer" event, which will draw service industry key personnel from all over the world, is the Pacific Automotive Show.

J. K. Wilkinson, Pomona Motor Parts, Pomona, Calif. is Show president for 1961. The Show will be held in the Los Angeles Memorial Sports Arena and Portico Annex, February 16-19, 1961.

Show President Wilkinson reports that hundreds of space applications have been received. More than a thousand booths will be filled with new parts, tools, equipment, supplies and accessories. Many of them are for the new models now being manufactured by the Automotive Industry.

Send reservation forms to the Pacific Automotive Show Housing Bureau, 714 West Olympic Blvd., Rooms 504-505, Los Angeles, Calif.



E. J. Muldoon (photo above) has been appointed general manager of the National Automotive Parts Association according to D. N. Test, Jr., NAPA president.



Cecil Morris (2nd from right) receives the first Pacco Pioneer Award, commemorating the fact that he was the first automotive jobber to purchase a Pacco Carburetor Tune-Up Kit. Mr. Morris, owner of the Battery and Electric Co., Greenville, S.C., accepts his plaque from Murray Ferber (right), sales manager of Precision Automotive Components Co., Manchester, Mo. Looking on are B. M. Smith (left), general partner of the National Parts Warehouse, Atlanta, Ga., and William T. Ellis, Pacco southeastern regional manager.

Management Institutes

The Automotive Service Industry Association has announced a program of sales management courses for automotive wholesaler members to be conducted at two leading universities in the United States.

A preliminary meeting of the Planning Committee was held at the La Salle Hotel in Chicago, recently, to outline the major elements to be included in the curriculum at the Top Management Course.

This course will be held at the University of Illinois the week of May 14-19, 1961.

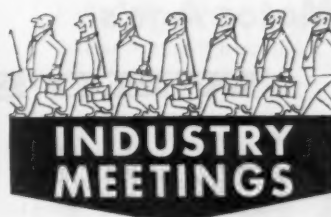
The Planning Committee members includes Edward Kukuk, President, United Auto Sales, Inc., Aurora, Illinois; Richard Derebey, Sales Manager, Albany Park Service, Chicago, Illinois; and Robert Sirotek, Vice President, Illinois Auto Electric Co., Chicago, Illinois.

The A.S.I.A. Wholesaler Executive Courses are under the staff direction of Richard A. Melvin, Executive Assistant, A.S.I.A., with the assistance of Howard McMurchie, A.S.I.A. Promotion Manager. Subject matter for the Management Institute will include sales management techniques, training for salesmen, financial management, advertising, and other popular management problems.

The cost will be \$130.00, all inclusive of tuition, room and board.

Hall-Toledo Appointee

Hall-Toledo, Inc., has announced the appointment of Robert Hollis as a direct factory sales representative. He will be responsible for sales and customer relations in Ohio, Indiana, Illinois, and various other market areas contiguous to these states.



Nov. 15—Connecticut Automotive Trades Assn. convention, Statler Hotel, Hartford.

Nov. 16-17—South Carolina Automotive Wholesalers Assn. convention, Wade Hampton Hotel, Columbia.

Nov. 17-20—California Automotive Wholesalers Assn. convention, Hotel El Dorado, Sacramento.

Nov. 17-19—Florida Automotive Wholesalers Assn. convention, Washington Hotel, Jacksonville.

Nov. 17-18—Seventh Annual National Forum of Automotive Air Conditioning, Sheraton Hotel, Dallas, Texas.

Nov. 18-20—Automotive Wholesalers of Illinois convention, St. Nicholas Hotel, Springfield, Ill.

Dec. 2-9—Automotive Electric Assn. annual meeting, Edgewater Beach Hotel, Chicago.

Dec. 4-5—Georgia Automotive Wholesalers Assn. annual meeting, Atlanta.

Jan. 28-Feb. 1, 1961—National Automobile Dealers Assn. annual convention, San Francisco.

Feb. 13-14, 1961—Automotive Booster Clubs, International annual meeting, Statler-Hilton Hotel, Los Angeles, Calif.

Feb. 14, 1961—General Membership Meeting, Automotive Affiliated Representatives, Biltmore Hotel, Los Angeles, Calif.

Feb. 14-15, 1961—Automotive Service Industry Assn. national convention, Biltmore Hotel, Los Angeles, Calif.

Feb. 16-19, 1961—Pacific Automotive Show presents ASI Show, Sports Arena, Los Angeles Memorial Coliseum, Los Angeles, Calif.

Motor Age's

WHO'S WHO



Richard A. Riley has been named president of Firestone Rubber and Latex Products Company, a division of The Firestone Tire & Rubber Company, in Fall River, Mass.



John T. Davis, photo, has been appointed advertising manager of McCord Corporation. He succeeds Edwin O. Bodkin who retired after holding the position of advertising manager for 37 years.

Donald R. Vance has been appointed supervisor of Perfect Circle Corporation's Engine Testing. He will be responsible for verification and testing of original equipment piston ring applications using customers' own makes of engines.



Richard E. Ruhe has been appointed assistant to the manager, accessory sales of the Schrader Division of Scovill Manufacturing Company, Inc.



Joseph P. Foley has been named marketing manager for the Electronics Division of Van Norman Industries, Inc. The Electronics Division manufactures electronic test equipment.

Donald V. Miller and Walter J. Tesch have been appointed regional sales managers for Holley Carburetor Co.

Virgil E. Urbine has been named manager of quality control for The Electric Autolite Company's Bay City, Michigan, division.

P. J. (Pete) Manus has been appointed manager of the Northeast district of Bendix Products Division, The Bendix Corporation. **W. T. (Bill) Mallon** will be assistant district manager (Brake).



Norman K. Anderson, left, has been appointed vice president in charge of marketing for Allen Electric and Equipment Co. Promotion of **V. Joseph Giuffre** from field sales manager to manager, automotive sales, was also announced.

Pete Pages has been named a territory manager for Merit Mufflers in N.J., New York City and Phila.

Carroll B. Clark has been promoted to zone manager of the Southeastern District for Purolator Products, Inc.

H. C. "Bud" Foster has been appointed general sales manager for both Gillett & Eaton, Inc. and its subsidiary, Arrow Head Steel Products Company of Howell, Michigan.



Robert G. Raab of Toledo has been appointed advertising manager of The AP Parts Corporation. He is also on the board of governors of the Advertising Club of Toledo.



L. D. Van Gundy, photo, has been appointed sales coordinator for the Grizzly Brake Division of MarPro, Inc. **Ray Eifel** has been appointed western regional sales manager for the division.

John B. Holland has been appointed automotive division manager of Oakite Products, Inc. He will headquarter in Detroit.



George A. Schumm, Jr., photo, has been appointed associated products marketing manager for the Ford Division of Ford Motor Company. He succeeds H. D. Hubbs who retired.



Ancel S. Page has been elected vice president of Dura Corporation. He is also general manager of Page and Page Co. Division, which was acquired by Dura in August, 1960.



Robert G. Bosart has been appointed to the position of manager of advertising and sales promotion, Consumer Products Division of Arvin Industries, Inc.

newscoop

Detroit's Greatest Show!
Twelve-Month Warranties
Six-Cyl. Aluminum Engine
Imports In Trouble
Business Upturn Predicted
Compacts vs. Standards
Servicing The Compacts

In the days ahead HERE'S WHAT TO LOOK FOR !!!

(Items gathered and edited by Ed Janicki, Bill Montgomery and Neil Regeimbal)

Detroit's Greatest And Most Successful Show

THE 43RD NATIONAL AUTOMOBILE SHOW, held in Detroit last month, turned out to be one of the greatest and most successful spectacles in automotive history.... It proved that more people than ever are interested in automobiles.... If their interest spurs actual buying, then industry should look forward to one of its best sales years.

Detroit's first national automobile show received a tremendous reception.... AMA officials are now thinking about making it a permanent Detroit fixture.... Final decision, however, will not be made until late this month.

Records of all sorts were smashed.... Attendance soared to 1,400,000 before the lights were finally turned off.... That is a world record, topping even the famous Paris Auto Show, which drew 800,000 this year.... Previous record for a national auto show in this country was set in New York in 1956.... It had a total attendance of 320,000.

Twelve-Month Warranties Come With The '61's

TWELVE-MONTH WARRANTIES became a reality last month.... One of the Big Three was first to reveal publicly that the warranty on its cars is being extended to 12,000 miles or one year, whichever comes first.... It came as a surprise.... Within a few days all other companies joined bandwagon, announced similar action.

Warranties cover everything but normal maintenance items and include parts and labor costs.... As you know, there have been warranties of this nature right along.... But they were strictly a matter of policy (General Motors has had a 12-12 warranty in effect since 1941).... However, such warranties applied only in certain situations and only on certain major repairs.... Warranties were never publicized direct to public.... They were limited to 3000-miles-or-90-days warranties in most cases.

Use Care When Lifting '61 Compacts

DEALERS AND GARAGES ARE CAUTIONED to use care when lifting 1961 compact cars.... It is important to have front hoist lifting pads positioned properly when car is lifted.... If care is not exercised here, part or all of the front end weight will be supported by the steering arms and linkage.... Lifting a car on arms and linkage can destroy front wheel alignment.... Also weaken the arms or linkage.

Chrysler Corporation's 6-Cyl. Aluminum Engine

CHRYSLER CORPORATION OFFICIALS confirm reports that company is shaping up a six-cylinder aluminum engine.... Motor Age has been discussing Chrysler lightweight powerplant for some time now.

Latest developments: corporation will go into limited production of engine within next two months.... Present schedules call for some 15,000-25,000 units to be turned out at Trenton, Mich., engine plant.... Engine will be installed in Plymouths, Valiants, Dodge Darts and Dodge Lancers going to fleet customers, some general buyers and a few corporation cars.

Slant six engine has a die-cast aluminum block with non-removable cast-in-place iron cylinder bore liners .100" thick.... Liners, however, can be rebored up to a maximum of .040" oversize.

Profits In The Automotive After-Market

PROFITS IN AUTOMOTIVE AFTER-MARKET was theme of MOTOR AGE Editor Frank P. Tighe's recent address before New Jersey Automotive Trade Association.... He stressed importance of personal contact with car owner by car dealer management.... "The car-owning public can be sold a variety of replacement items and repair work.... What is needed is for the car dealer's service personnel to put on a smile when they put on their shop coats."

Creeping In Cars With Automatic Transmissions Stopped

HOW TO ELIMINATE CREEPING in automatic transmission when car is idling in gear? This has long been a problem.... Now one company comes up with a device which it says will solve this.

Developed by Gaylord Products, Inc. of Chicago, device, says the Company, maintains pressure in brake lines when car comes to full stop.... Pressure is released when the accelerator is pressed.... Several car companies reportedly are showing interest in Gaylord device.

Imports Face A Dismal Future

LOOK FOR MORE IMPORTS TO PULL OUT of U.S. market.... Things aren't getting any better for foreign makers.... Many are resorting to price cuts.... Also high bonuses to dealers.... Many extra cost equipment items are being thrown in as buyer incentives.

Import sales in July were the worst in three years.... Sales for year may plummet to 350,000 units.... Compared with a record 609,000 last year.... Even best-selling Volkswagen is headed for trouble, some observers say.... Dealers note a growing number of VWs at auction lots.... VW trade-in value is slipping, too.... No. 2 Renault also has been skidding....

Price Stability In The Auto Industry?

AUTO INDUSTRY HAS HELD LINE on car prices.... Actually, average industry decrease in prices is just a shade under those for 1960 models.

Some prices are unchanged.... Some have decreased slightly.... Others are up a bit.... But it all amounts to a general price decrease.... Prices were reduced substantially on certain high-price makes.... But at the same time certain standard equipment items were removed.... They are now extra options.... In other cases, equipment was added, but prices weren't changed.

Sharp Business Upturn Predicted

LOOK FOR HEALTHY BUSINESS UPTURN.... It will bring sharp economic raises in some areas and industries.... Should be evident in next few weeks, according to new economic forecasts.... Upturn will start with a surge of consumer spending following pre-election hesitancy.... This will lead up to record Christmas sales.... Early next year, momentum will carry into basic industries—steel, aluminum, machine tools.... Then another solid upturn will be underway.

Sales response to 1961 models in October reinforced this belief.... Government forecasters expect sales of compacts to approach 50 percent of all new-car sales as a result of some carry-over spending reluctance (instead of 40 percent predicted earlier).... They also expect spending for repairs to older cars to creep upward in areas which won't feel economic improvement right away.

Compact vs. Standard Car

HOW HAVE THE COMPACT CARS FARED in fleet operations so far? Some indication of their performance comes from Lee Associates, fleet leasing consultants.... A Ford Fairlane 6 and a Falcon 6 were compared.

The results: it costs $8\frac{1}{2}$ mills per mile, or less than a penny a mile, to operate the Falcon than the Ford Fairlane.... Total operating cost per mile for Falcon amounted to 2.7¢ compared with 3.55¢ for Ford Fairlane.... Largest savings occurred in cost of gasoline and oil.... With Falcon registering 22 mpg compared with 15 for Fairlane in stop-and-go city driving.

Difference in maintenance cost was very insignificant, according to Lee's records.... Maintenance savings on Falcon, including greasing and washing, amounted to a mere half mill per mile.... An additional half mill per mile savings was realized on tires, including replacement costs.

Ford's Small Car May Be Built In U.S. And Europe

HERE'S LATEST TIP ON FORD'S UPCOMING VOLKSWAGEN-TYPE CAR, tentatively named the Cardinal.... Reliable reports say two sets of dies are being readied in Germany.... This leads to obvious conclusion that Cardinal will be made in Europe and the United States.

Car may initially be built at one of Ford's plants overseas to keep costs down.... Then imported here.... However, because of strong pressure from the union, Ford may decide to build the car in the U.S.... Later may produce a similar version abroad for its market there.

Servicing Cooling System On Cars With Aluminum Engine

CAR COMPANIES ADVISE TO USE CAUTION in maintaining the cooling system on cars with aluminum engines.... American Motors suggests using permanent type antifreeze specifically recommended by manufacturers.... Alcohol base anti-freezes should not be used in an aluminum engine, AMC's service department cautions.

AMC says coolant solution should be drained and replaced each year for effective protection.... Many radiator cleaners contain strong chemicals.... They should not be used in aluminum cylinder blocks.... Proper precautions should be taken to protect engine against corrosion.... Use of water containing chlorides in excess of 100 parts per million should be avoided.

Income Of Auto Repair And Service Firms Up

TOTAL INCOME OF AUTO REPAIR, service, and vehicle rental firms almost doubled between 1954 and 1958.... Rising from \$2.2 billion to \$3.9 billion.... This was largest increase in receipts of any branch of the service industry, according to new figures from U.S. Census Bureau based on its latest business census.

In same four-year period, number of firms in the category rose from 94,342 to 125,240.... Auto and truck rental service portion reported that receipts doubled.... From \$300 million in 1954 to \$600 million in 1958.

Comparison of New Cars With 1960's Models

NOW THAT THE '61'S ARE HERE, how do they stack up against 1960 models? Average wheelbase of all 1961 cars has been trimmed to 117.9 inches.... Compared with 120.6 inches last year.... Overall lengths have been cut from 210.9 in. to 204.7 in.

With addition of many economy engines, horsepower ratings really took a dive.... Average horsepower on 1961 cars dropped to 214.5 from last year's average of 248.... Chrysler's 413 cu. in. engine leads industry with a 350 HP rating.... Corvair's 80 HP job is the smallest.

Government Promoting Car Redesign For Safety

U.S. PUBLIC HEALTH SERVICE distributing article by Roswell Park Memorial Institute contending highway deaths could be cut in half by changing auto design.... Suggested are: Installing a strong "bolt action" door lock and a sealed governor set at 70 mph; eliminating "hard top styling" to return to strong top supports; redesigning truck rear structures to prevent new low cars from running under them; removing all pointed objects from interiors.

Compacts Easy To Service

SERVICING OF THE FOUR NEW COMPACT CARS presents no great problems.... They're simple to work on, in most cases.... The number of special new tools that dealers and garages will need has been kept at a minimum.

Outlays for new tools range from \$279 for Dodge Lancer to \$356 for Pontiac Tempest.... That's cheap, considering cars are completely new from bumper to bumper—new engines, transmission, axles, etc.

Service departments are trying feverishly to hold tool costs down.... Engineers are constantly coming up with designs that simplify servicing.... There's a closer liaison between engineers and service people than ever.

Students Make Good Customers

STUDENTS CONTINUE TO RISE IN IMPORTANCE as customers for service, accessories, fuel, and other sales as their number increases.... This fall, some 48.6 million persons will enter schools and colleges.... 10.2 million of which are in high schools and another 4 million are in colleges and universities.... Number of students who drive is still rapidly increasing, government school experts say.



WHO WILL HIT THE JACKPOT?

THE cup of confusion runneth over. When car factories announced the 12,000 mile or 12 months new car warranty everybody . . . factory, dealer, and buyer suddenly got \$ marks in their eyes. Now no one seems to know whether it is a plague or a promised land. ¶ The National Automobile Dealers Association has called on factories for a spelling out of the 12 - 12 warranties. The NADA Board has said that there are numerous misconceptions on the part of the public regarding what the new warranties provide in parts replacement, repairs and maintenance. ¶ NADA's announcement pointed out that numerous inquiries have indicated that new car buyers do not understand that the warranties only apply to the workmanship, performance and the parts assembled at the factory level which may subsequently prove defective and require replacement. ¶ Dealers have had to explain that the manufacturers' warranties do not cover ordinary maintenance, care or repairs required as a result of normal operation, routine wear or owner neglect. ¶ One dealer was asked to replace a front fender after the owner had skidded into a pole. The warranty, of course, didn't apply. Nor does it to such items as tires, batteries and other units covered by separate guarantees. ¶ Meantime, back at the factories, there is little inclination to talk about the warranties. It is expected that it will take about three months to iron everything out. (And, if the owner has any problems within that period, he is still covered by the old 90-day warranty.) ¶ A top Independent Garage Owners of American spokesman said that he expected little difficulty with the 12 - 12 warranties. "Car owners come to us for service, anyway." The new car buyer will be inclined to take his car back to the dealer during the warranty period but for satisfaction and service they end up with us anyway. If the owner wants the right kind of service they'll have to take it to the independent and pay for it." There's enough in the jackpot for everyone. ¶ The IGOA spokesman sounded a little disgruntled. He had bought a new car and was having trouble with his selling dealer at the time. ¶ If the 12 - 12 warranties mean the continuing improvement in Quality Control at the factories, much good will be accomplished.

Faithfully yours,

Frank P. Tighe

TRUCK HIGHLIGHTS

A round-up of the host of items in the 1961 new truck picture



Above: Dodge Power Wagon.



Right: Corvair 95 Rampside pickup.

TAKING a look alphabetically at some of the truck highlights for 1961, we can start with Chevrolet:

Refinements in the highly successful chassis design introduced a year ago, further expansion of models, and styling identification changes mark the Chevrolet truck line.

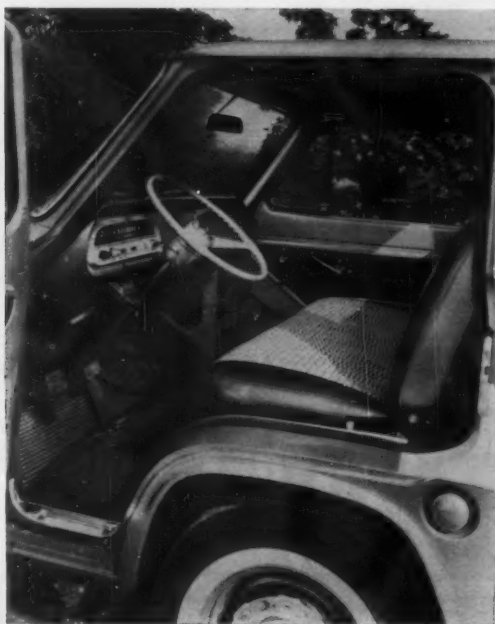
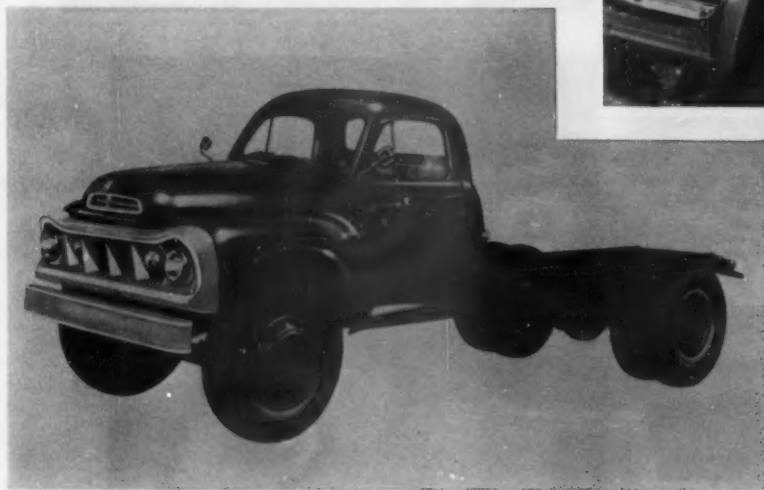
New cab features for 1961 emphasize a lower and narrower floor tunnel on most light-duty models for improved foot and leg room with the 3-speed or Powerglide transmission.

Included in the 1961 line are three new 4-wheel drive models for light-duty, maximum traction application. The 127-inch wheelbase, $\frac{1}{2}$ -ton vehicles are available as cab-chassis, wide-box pickup and conventional box pickup models rated from 4900 to 5600 pounds gross vehicle weight.

Chevrolet also has introduced the "Corvair 95"—a new series of short wheelbase, rear powered, light-duty trucks. With a 95-in. wheelbase and short overall length of less than 15 ft., it has a short turning radius and

for 1961

by the Editors of Motor Age



Above: Corvair pickup emphasizes a lower, narrower floor board tunnel.

Transtar by Studebaker available as chassis-cab, platform or with stake type bodies.

is highly maneuverable in and out of traffic.

Comprising a panel delivery and two pickup models, the "Corvair 95" line incorporates innovations for easy loading and cargo accessibility. One of the pickup models has a unique, swing-down, side-loading ramp.

A stylish new Dart half-ton pick-up and two new economical 6-cylinder engines highlight the 1961 line of Dodge trucks. In announcing the new line of trucks, Dodge emphasized the passenger car styling and handling characteristics of the Dart pickup and

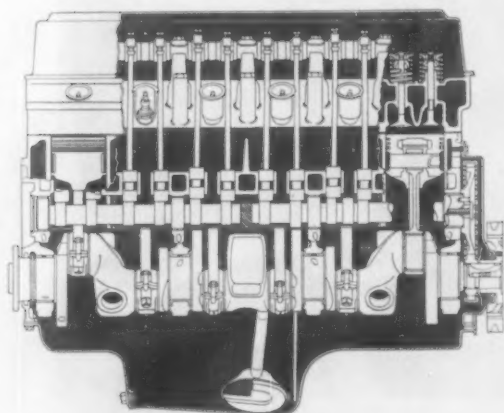
the exceptional fuel economy to be derived from the slant-6 engines.

A new drop center frame, coupled with balanced design suspension and wide treads, it is said, gives the Dart "remarkable road stability and makes it as easy as a passenger car to drive."

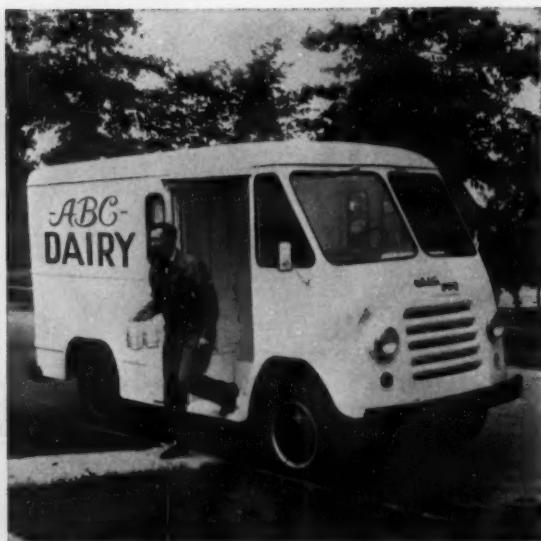
Standard on the Dart pick-up is a 140-horsepower, 225-cubic-inch, overhead valve 6-cylinder engine inclined 30 degrees. The slanted engine makes possible a low hood

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The White Motor Company's PDQ features a new "M" Series for delivery of milk and dairy products. It has a unitized insulated fiberglass sandwich body.



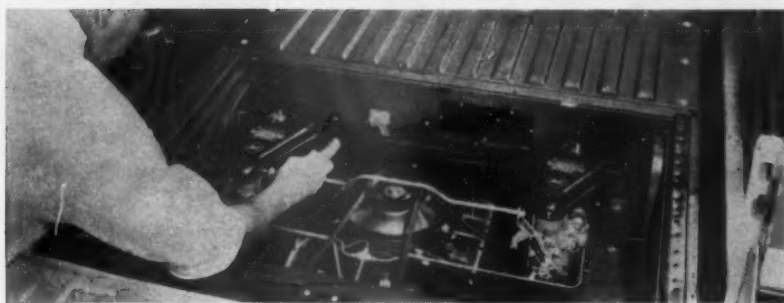
Cutaway of the 1961 Dodge truck 140-horsepower 6-cylinder engine. Modern casting techniques reduce section thicknesses and weight.



The 1961 Champ by Studebaker features passenger car type instrument panel, safety cone steering wheel and a wrap-around windshield. It is suitable for routine jobs and heavy duty work.



Ford's 1961 light-duty F-100 Styleside pickup features a new type integral cab and body. Choice of 135-hp 6 or 160-hp V-8 engines.



1961 Chevrolet Corvair 95 Truck has an easily removable floor panel for access to 95 engine for tuneup and adjustment operations.

height and helps make for easy servicing.

This engine produces 215 lb.-ft. torque from 1,600 to 2,800 RPM. Its maximum RPM is 3,900.

Ford's new 1961 truck line marks the greatest commercial vehicle expansion in Ford Motor Company's 58 year history. More than 100 heavy duty, diesel and gasoline powered trucks have been added to the Ford line for 1961.

Ford also will have a wide selection in the economy pickup field with three completely different models—the conventional F-100 pickup on wheelbase of 114 and 122 inches, the passenger-car-styled Falcon Ranchero on a 109.5-inch wheelbase and the cab-forward

Econoline Pickup with a short 90-inch wheelbase.

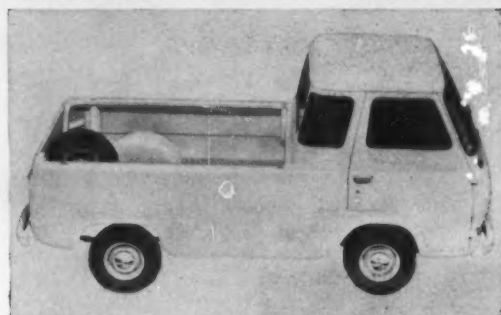
Pick-up, Van, and 8-passenger Station Bus models represent the Econoline Series of light commercial vehicles introduced by Ford. Mounted on 90-in. wheelbase, these vehicles employ Falcon chassis components with the 144.3-cu. in. 6-cylinder engine standard.

The 12-volt electrical system uses components from other Ford vehicles, with a 25-amp. generator standard, and a 30-amp. low cut-in generator and regulator optional. Electrical components associated with the engine are located under the engine cover for accessibility.

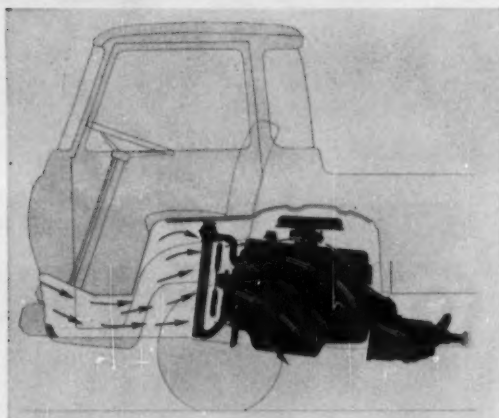
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GMC Junior Van, only 14-feet long was one of the featured displays at the Auto show at Cobo Hall, Detroit.



Ford's new Econoline series pickup with many components from the Falcon included.



A colorful lineup of trucks, ranging from the compact GMC Junior Van to various heavy-duty highway tractors, appeared in the GMC Truck & Coach Division exhibit at the 43rd National Automobile Show. Trucks included a Suburban station wagon, GMC Junior Van package delivery truck, a Wide-Side pickup, a DF7105 aluminum tilt-cab diesel high-way tractor, a BW5500 tandem-axle tractor powered by a 401 V-6 engine, and an L7000 steel tilt cab tractor.

The smallest model was the Junior Van, a unit shorter than American-made compact cars yet having the bulk load capacity of a one-ton stake truck.

The Studebaker line of trucks includes the new Champ pickups, first introduced in February, 1960, and the Transtar series of medium and heavy duty vehicles.

With its new concept in pickup truck design, the Champ combines an attractively-

styled, comfortable cab with the functional strength of a solidly-built, rugged truck. These well-equipped cabs are mounted on a strong, highly-rated chassis. The sturdy frame assures rugged, long life.

For 1961, the Champ features a new 170 cubic six cylinder overhead valve engine.

The White Motor Company's Reo Division has a new V-8 truck and tractor series with a 90-inch bumper-to-back-of-cab measurement. All models in the D-600 and D-700 series are powered by Reo's Gold Comet V-8 gasoline engines.

The series consists of six models: two single axle tractors with GCW ratings of 65,000 and 78,000 pounds; two tandem axle tractors with GCWs of 70,000 and 78,000 lbs. and two tandem truck models with GVW ratings of 42,000 and 52,000 lbs. respectively.

(Part Two of the 1961 Truck Highlights will appear next month.)



Slip ring and silicon end housing showing method of tying down brushes prior to assembly of rotor. Light wire or string can be used. Cut and remove when done.

Alternator Service Is Easy and Profitable

*New step-by-step procedures
for profitable Service*

By T. J. McCabe, Service Editor

IN recent issues of Motor Age we have covered the basic theory of operation on the alternator. Moreover, details of service and theory on other components such as voltage regulators, selenium and silicon rectifiers have been fully covered.

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Remove slip ring end housing screws after removing metal dust covers that direct air to heat sinks.

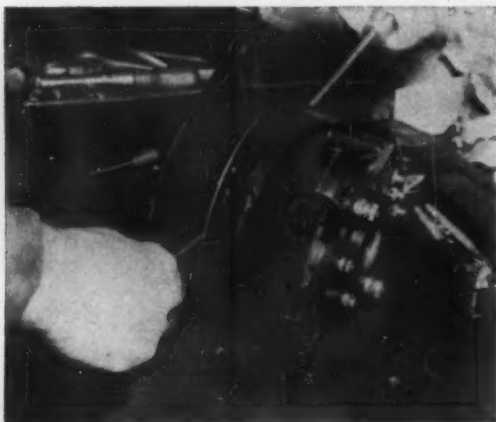


Use a screw driver to pry out bearing dust cover and use caution not to damage the alternator casing.



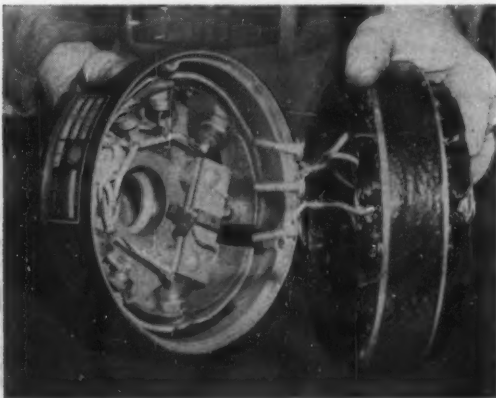


Use a suitable puller or as shown above, a brass drift and hammer against rotor shaft to separate.



After separation, pry apart drive end housing and rotor assembly. (Pulley removed conventionally).

View of slip ring and brush housing with silicon rectifiers on left, stator assembly on the right.



Alternator Service CONTINUED

The alternator as we know it in the automotive field, has been used to produce large amounts of current since 1945. It was reportedly first introduced by the Leece-Neville Company, in conjunction with the military, as part of a joint war effort. The alternator has since increased in use and popularity throughout the years in many fields of industry.

Alternators can be found in use on trucks, buses, marinecraft, railroads, and in 1961 will be standard equipment on one automobile manufacturers complete line of cars and trucks. Because of its simplicity of design and rugged construction, maintenance problems will be kept to a minimum. As for service, you'll find it very similar to a conventional generator, both as to assembly and disassembly. As for testing, the same instruments are used that you now have on hand. Just keep in mind that when checking voltages from the alternator stator terminals that the current is alternating, thus a D.C. voltmeter cannot be used. However, there is no need for a voltmeter when testing at these points, just use a test lamp as covered later in this text.

With no special tools required to service the alternator, they really are a simple and profitable service item. Most important, however, is that you must bone up on more theory and practical training on the new alternators. Contact your jobber about the many alternator service clinics that are now run very frequently each year in your area. Much time and effort is put into this training program by everyone concerned. This is done so that you will have available the kind of profitable service training you need to keep alert and prosperous in an ever changing age of motor-ing.

Trouble Shooting:

Two conditions usually indicate some fault

Any suitable puller arrangement can be used to remove rotor bearing and slip ring assembly. →

in the charging system. One is that of an under-charged battery. The other an over-charged battery. The first thing to check under any of these conditions is the battery itself. Use the procedure recommended by the battery manufacturer in making a battery test. Test cell-by-cell voltage. Check each cell with a hydrometer for specific gravity. Then make an overall voltage and load test. After checking battery condition, next check the alternator drive line.

Test for slipping drive belt: Try to turn fan of alternator with one finger. If it can be turned then its too loose. Adjust as required. In checking belt, look for incorrect pulley or belt. Worn belt or pulley. Glazed belt or pulley. Finally check for misalignment of drive and driven pulleys. If belt is glazed, replace it. Readjust belt after a few minutes running to correct for belt seating and stretch.

Over-charged Battery Or High Charge Rate:

With the above conditions; check for high voltage regulator setting. Use a test light or voltmeter and check the ground circuit of voltage regulator and alternator. Remove regulator cover and check for burned-out jumper wire from voltage regulator bottom contact to ground. Check for open circuited regulator coil.

Discharged Battery Or Low Charging Rate:

Check for low voltage regulator setting. Remove regulator cover and examine jumper wires in regulator field circuit for open's. Check for correct wiring from ignition switch to regulator ignition terminal. Remember, some vehicles have a resistance built into the ignition switch or primary wire. This will affect the voltage delivered. Make sure that battery voltage is being supplied to the "IGN" terminal of the regulator. The alternator doesn't utilize residual magnetism for initial

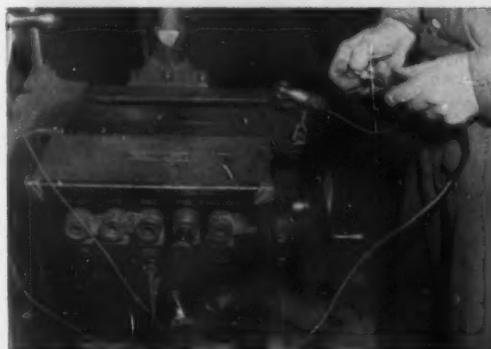
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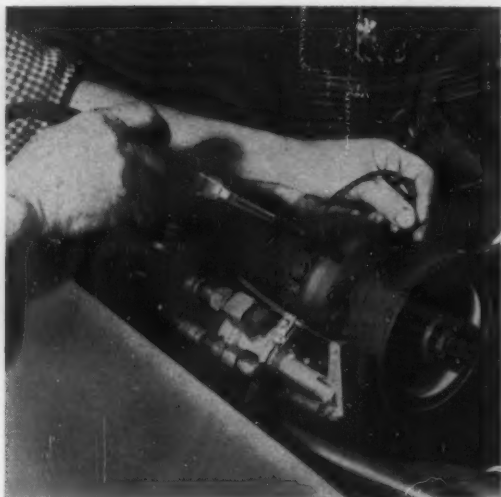
When soldering leads to silicon rectifiers keep iron contact with rectifier to the minimum.



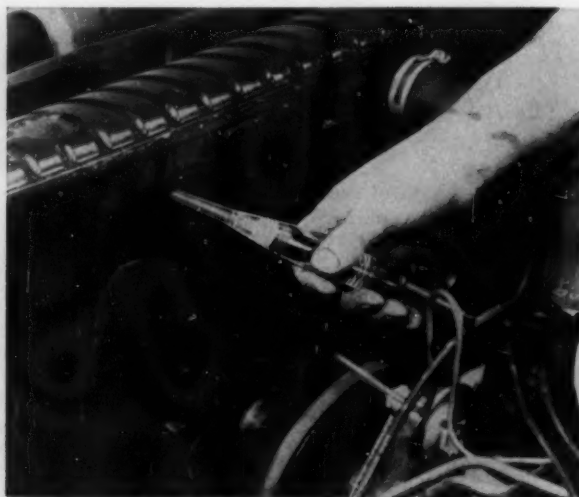
After pressing on collector ring and soldering field coil leads true-up on lathe.



Test silicon rectifiers using test lamp. Lamp lights in only one direction.



Using extension hose to sniff air conditioning compressor shaft seal for leakage.



The electronic probe will flash red should a leak be indicated in the radiator top tank.

DETECTING system leaks ELECTRONICALLY

Halogen leak detection techniques and their automotive applications

By Warren C. Hutchins, Manager
Application Engineering, General
Electric Co., Instrument Dept.

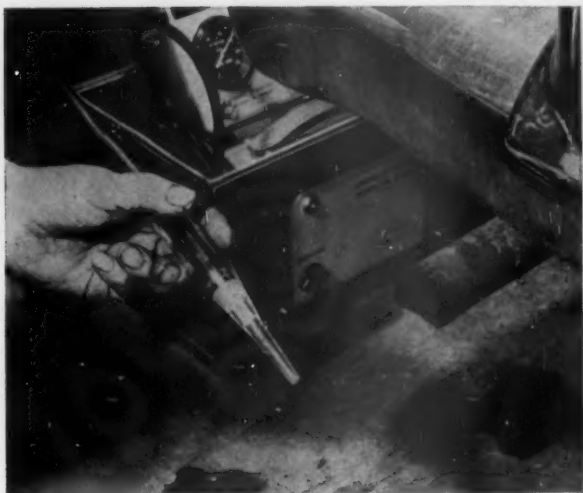
THE objective of this article is to provide the serviceman with information on leak testing equipment. Techniques will be discussed. Profits to be derived from pinpointing leaks during automotive service will also be mentioned.

First, let's take air conditioning units. Service shops that repair air conditioners are often alarmed at the cost of locating and repairing leaks. Too frequently the leak is not located. The irate customer returns again to demand better service.

Usually the loss of only 8 or 10 ounces of refrigerant reduces cooling capacity to where the customer should return for service. Three or four leaks, each at a rate of only 5 or 6 ounces per year, means the unit will need recharging in a few weeks. If the customer must return for service more than once a year, he may go elsewhere.

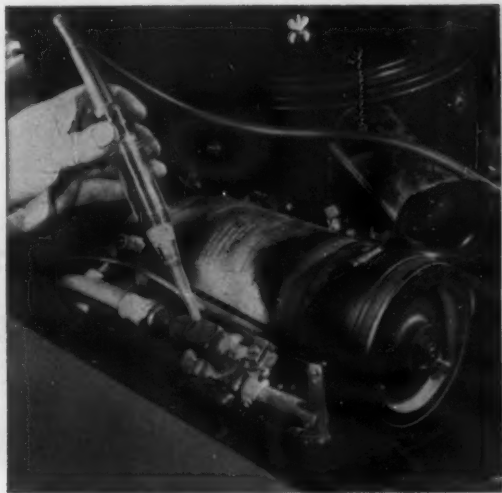
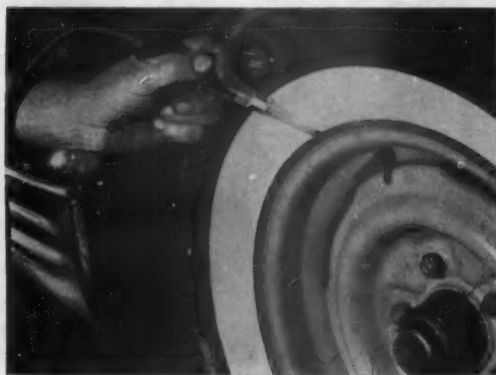
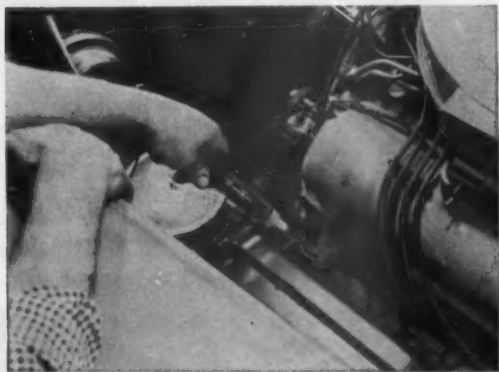
There are two main types of detectors available for locating leaks of R-12, R-22, and R-114. The *halide torch* was for many

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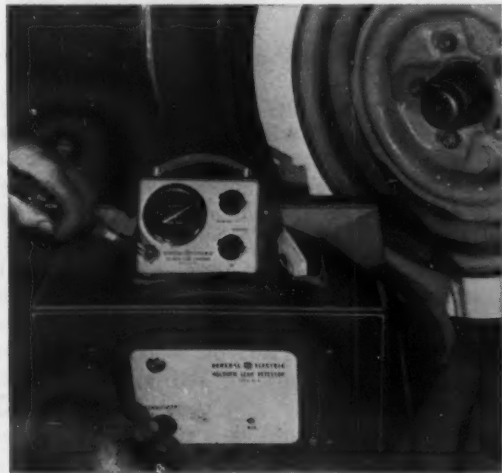
Sniffing exhaust with electronic probe leak detector. Flash of probe indicates water seepage.

Electronic sniffer used to probe exhaust leaks at exhaust manifold and cylinder head joints.



All connections can be probed to detect leaks of $\frac{1}{2}$ ounce per year seepage of refrigerant.

Setting sniffer to desired rate of leak detection sensitivity by use of Halogen Leak Standard.



Charging tubeless tire with F-12 and using Halogen probe, slightest leak can be detected.

Winterizing Check-ups Spur Sales & Service

Your shop or station should be promoting winterizing services and repairs. All cars should be checked and repaired to insure trouble-free driving this winter

By William M. Montgomery, News Editor

THE cold months are here: Have you been promoting all your winterizing sales and services? This is the time to "turn on the heat" not only in your garage, but on pulling in your customers for winterizing services. Before the snow and ice appear, all cars should be checked over to be sure that they are safe for driving in the coming months. Items that are checked may become a profit sale for you. Don't miss this excellent opportunity to sell your sales and services.

Motorists should be urged to have their cars checked thoroughly. Here are major areas that the mechanic should inspect in a winterizing checkup. Check the battery for condition and charge. The battery has more troubles during the winter because voltage drops with the temperature. It must always be fully charged. Connections must be tight. Corrosion can be discouraged by removing film on the battery case with a solution of water and baking soda.

Look the exhaust system over very care-

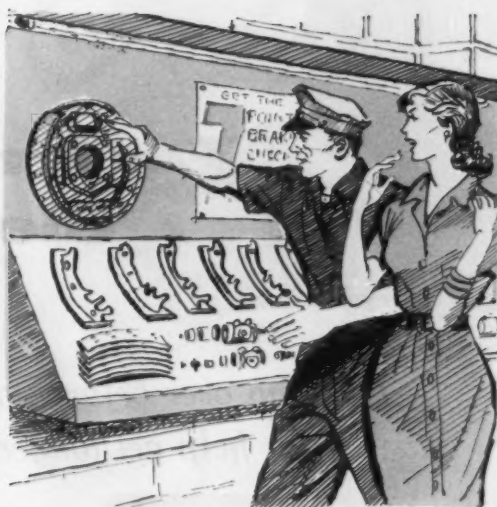
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BRAKE CHECK STICKER—One way to make extra profits is to put a sticker next to the oil change sticker. It should state when the brakes were last relined or adjusted. You can then check the brakes regularly and charge for each adjustment. Also you can tell the customer when it is time for new lining before the drums are scored or a brake failure occurs.





COFFEE BREAKS—This is the sales technique that I use. Every morning we have a coffee break at 10 a.m. This includes customers as well as our employees. It makes everyone a bit happier. I furnish all coffee, cream and sugar. The customer feels very satisfied for being treated so well while his car is being serviced. Mrs. Fred F. Wagner, Erie, Pa.



BRAKE PARTS DISPLAY—Convince car owners that brakes need periodic attention and replacement by using a brake display. Displaying a complete brake assembly that has been replaced after wearing to the danger point makes a very impressive exhibit. Place it where customers can see it. R. Blagden, East Hampton, Conn.

SPONSOR CAR WASH—You can help a local service club raise money and also increase your station's business by sponsoring a car wash. You provide the water, soaps and towels free. The customers that they will bring in may become your permanent customers. After their cars are washed offer them a 50-star flag with every lube job or oil change. Ted McFee, Drexel Hill, Pa.



GOODWILL BUILDER—Periodically we buy old clunkers and park them behind the station. We advertise that anyone can have any part for two bucks. That means a door, window, fender, etc. Our investment in the few old cars is well justified, thru the free advertising and new customers we get. Often we get to repair or install these parts. Henry Joseph, Sr., Gardenville, Pa.



For longer VALVE life check the old ones

*Look'em over before you pitch them out. It
can help get longer life from the next set*

By **A. K. Hannum**, Chief Engineer, Replacement Division
Thompson Products and Toledo Steel Products,
Thompson-Ramo-Wooldridge, Inc.

SO, you've got an engine with bad valves! Whether early failure or normal life, look these valves over before you pitch them out. They can help you answer the all-important question, "Why did these valves fail like they did?" When you know that, you'll get longer valve life.

Check the appearance of the old valves against the wear patterns shown here. You'll get a clue to what might need correcting to keep your new valves out of the junk box too early in their life. Be thorough. More than one picture might apply to your valve-failure problem.



APPEARANCE: Face burning
USUAL CAUSE: Seat distortion
CAN BE DUE TO . . .

- Block and head faces not flat or burr-free
- Improper head-bolt torque
- Dirty or blocked coolant passages
- Improper torque or misfit intake manifold, especially on V-8's





APPEARANCE: Face and head burning

USUAL CAUSE: Pre-ignition

CAN BE DUE TO . . .

- Glowing combustion deposits because of incorrect fuel and/or lube
- Spark plugs too hot or cracked
- Valve edge too thin
- Detonation because of too-low-octane fuel and/or excessive spark advance
- Excessive engine load
- Air/fuel ratio too lean

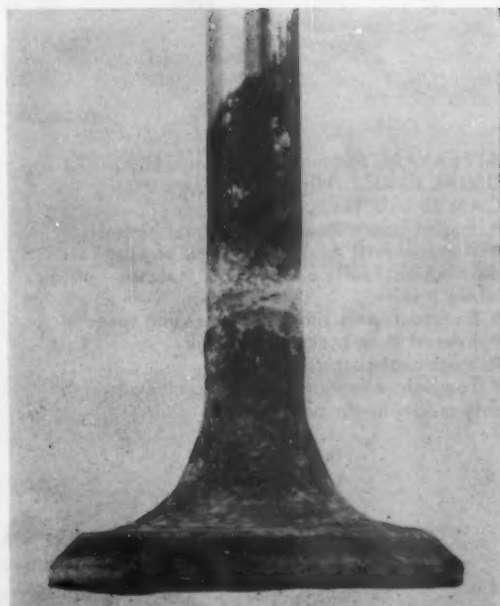
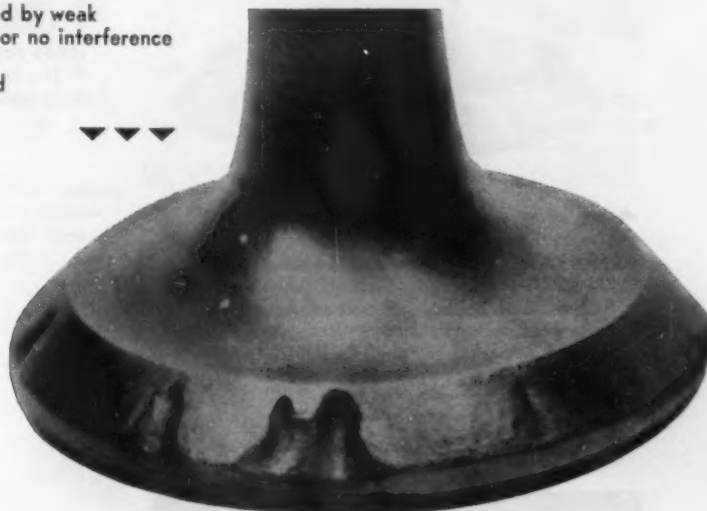


APPEARANCE: Face guttering (as shown) or
Deposit flake-off

(Valve shown has been cleaned)

CAN BE DUE TO . . .

- Inadequate seating force caused by weak spring, seating surface too wide, or no interference angle
- Rotator inoperative or required
- Unsuitable fuel



APPEARANCE: Face burning with
carbon build-up on stem

USUAL CAUSE: Sticking

CAN BE DUE TO . . .

- Worn or bell-mouthed guides
- Missing or worn stem seals
- Over-lubrication
- Unsuitable lube oil

MORE ON NEXT PAGE

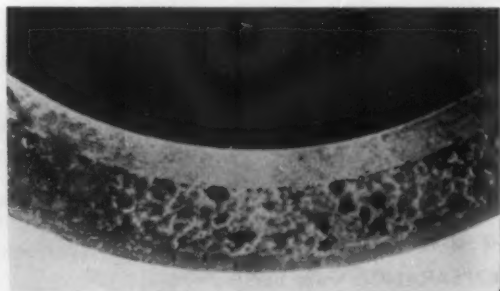
VALVES . . .

CONTINUED



▲▲▲
APPEARANCE: Circular face grooving
CAN BE DUE TO . . .

- Self-rotation because of over-speeding and/or weak springs
- Use of unleaded or "dry" fuels with valve or seat of incorrect material



▲▲▲
APPEARANCE: Face peening
USUAL CAUSE: Hard deposits
CAN BE DUE TO . . .

- Unsuitable fuel and/or lube
- Too soft a face. Harder faced valve might be desirable



▲▲▲
APPEARANCE: Pie-shaped breaks (as shown) or radial cracking
CAN BE DUE TO . . .

- Frequent, sudden changes in engine output
- Abruptly shutting down engine after a high-speed run, not allowing valve to cool gradually
- Too light a valve for the work. Heavier duty model might be desirable



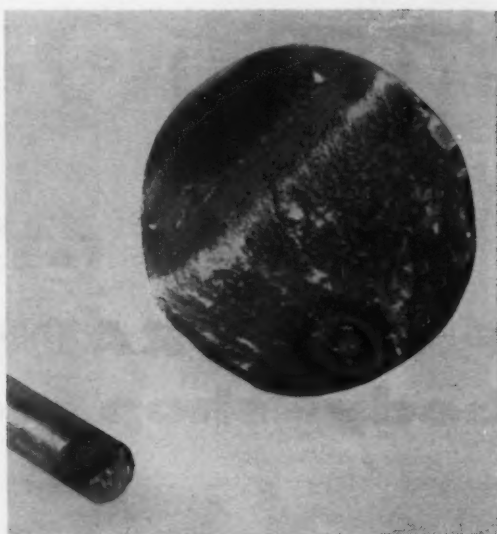
▲▲▲
APPEARANCE: Stem neck-down
USUAL CAUSE: High-temperature erosion
CAN BE DUE TO . . .

- Engine operation beyond normal output
- Air/fuel ratio too lean because of poor fuel distribution, faulty carburetion, leaking intake manifold
- Incorrect spark timing at operating speed
- Exhaust back pressure too high
- Stuck heat-riser valve
- Too light a valve for the work. Heavier duty model might be desirable



APPEARANCE: Stem fatigue break. Note curved lines radiating from point where break began
CAN BE DUE TO . . .

- Face or seat off-square or run-out
- Seat distortion because of block and head faces not flat or burr-free, improper head-bolt torque, dirty or blocked coolant passages, improper torque or misfit intake manifold especially on V-8's
- Excessive stem-to-guide clearance
- Bell-mouthed guides
- Distorted or cocked valve spring



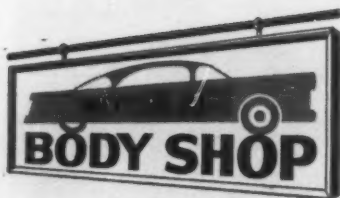
APPEARANCE: Stem impact break. Note (1) how lines in enlarged cross-section view differ from those at left and (2) the "step"-type break
CAN BE DUE TO . . .

- Excessive tappet clearance
- Over-speeding and/or weak springs
- Worn, starved, or stuck hydraulic lifters
- Excessive spring pressure
- Valve sticking open and being hit by piston
- Broken seat insert
- Foreign pieces between face and seat



APPEARANCE: Head cupping
USUAL CAUSE: Excessive heat
CAN BE DUE TO . . .

- Engine operation beyond normal output
- Air/fuel ratio too lean because of poor fuel distribution, faulty carburetion, leaking intake manifold
- Incorrect spark timing at operating speed
- Exhaust back pressure too high
- Stuck heat-riser valve
- Too light a valve for the work
- Insulating effect of face deposits
- Excessive stem-to-guide clearance
- Valve and/or seat not ground properly, leaving too much of valve head in combustion chamber
- Reversed interference angle
- Valve springs too strong or wrong height
- Excessive valve lash



PHOTOGRAPHS SELL body shop services

Investment in a picture-in-a-minute camera has resulted in increased work volume and profit for this body shop

EVERY time we are called out to give an estimate on body work necessitated by an accident, we take along our "instant" camera," says Ellsworth G. Pritz, owner of Pritz Autobody and Radiator Service, York, Pa. "We snap a picture of the damages estimated on the car. Then we attach this to the estimate that we give the insurance adjuster or insurance company. Because our estimate charges can be compared to the attached photograph, the adjuster seldom tells the motorist to hunt around for more than the single estimate on the car. As a result, we get the jobs more quickly."

Pritz points out that operating the picture-in-a-minute camera is simple. Any employee sent to estimate on a job can handle it. The photographs are also used by the shop in preparing estimates when someone other than the shop owner or his service manager goes out to estimate on a job. In addition to the written report of all the necessary repair work required on the car, several pictures

taken from different angles adds a more comprehensive description of the body work necessitated on the car. The combination of the report and the photographs, therefore, offers the shop owner or his service manager a better opportunity of estimating the cost or repairs to the particular vehicle.

"We take photographs of cars that are brought in for our own files as well," says Pritz. "Whenever we realize that a motorist does not intend to fix the necessary damage at an early date because of personal or legal reasons, we always take a picture of the damages that we have estimated. We attach it to the duplicate estimate that we have and file it."

"If the motorist brings his car in to have the work done, we may notice that it requires more work than was originally noted on our estimate. We not only have the duplicate estimate to show the customer but also a photograph of the damages that we originally estimated. Suppose he should have more damage



Ellsworth Pritz, owner of the body shop takes a picture of customer's damaged car. Photo will be kept as a permanent record of damage.

to his car than was originally there when he first came in? We can point out to him that this was not part of the original estimate when he made his initial visit here."

The shop also uses the camera to take before-and-after pictures of work that has been done. It posts them on a bulletin board where motorists can see them. He uses these pictures to point out the quality of his workmanship to customers who are discussing different repairs on their cars. Almost every type of damage and wrecked car has been pictured in this shop. The "after" photographs show the quality type of workmanship that is done here. As a result, the shop operator has found these before-and-after pictures to be "salesmen" for his services.

Pritz also places before-and-after pictures of all work done on cars in folders which he gives to the car owner. An imprint on this folder gives the complete name and identification of this shop. All who review these

(Continued on page 76)



Picture-in-a-minute camera is easily handled by any shop employee who is sent out to estimate autobody damages.



One minute after picture is taken it is removed from the camera. It can be sent to the insurance adjuster or kept on permanent file.

Here is the picture that was snapped by Ellsworth Pritz with his camera.





IGO of North Carolina had a splendid turnout for their recent annual convention. Bryan Davis, known for his enthusiastic travels through North Carolina on behalf of IGO, retired as president. George Miller took over as the new prexy of IGO of N.C. From left: Charles Barnes, vice president; Harold Smith, vice president; J. L. "Roy" Orr, secretary-treasurer; Davis; and Miller.

IGO IN ACTION

*Pictorial report on some
of the happenings in IGO
units around the country*

... by W. H. Wolfe, Managing Editor

A very active IGO group is the IGO of Metropolitan Denver. Officers that are serving for 1960 are shown here. From left to right, back row: Gerald Davis, vice pres.; Ross Gentzler, treas.; James Kientz, sec. Seated, left, is Frank Carmichael, immediate past pres.; and Dick Jones, pres. (right).



One of the highlights of the IGO of Kansas state convention earlier this year was the election of officers. Mel Norris was re-elected pres. Other officers of Kansas, front row—left to right: Herman Stiles, 2nd vice pres.; Norris; E. E. Sanders, 1st vice pres. Standing, left, is Al Greiving, treas.; and Roy Corfman, secretary, all of the Independent Garage Owners of Kansas.



Below: Installation of highway signs has been a national project of IGO of America this year. Below, Officers of the Northwest Louisiana Unit in Shreveport look over one of the highway signs. From left: Edgar Bland, sec.-treas.; Monette Bowman, pres.; Worth Hodge, vice pres.; and Maj. R. L. Drake, Shreveport Police Dept.



Connecticut formed a state association of IGO recently. Officers grouped around an IGO plaque are from left: Alexander J. Morris, pres.; Joseph Dastoli, 1st vice pres.; Alexander Zavatsky, treas.; Howard Temple, sec.; and Donald Fantozzi, 3rd vice pres.

What to look for when you run into TROUBLE

Troubleshooting Engine Bearings Failures

By William M. Montgomery

The Problem

Worn Bearings

*Look
for:*

- a. Low oil pressure
- b. Faulty oil pump
- c. Dirty oil
- d. Crankthrows out-of-round
- e. Ridged & scored journals
- f. Insufficient oil clearance
- g. Oil starvation

Bearing failure

*Look
for:*

- a. Diluted oil
- b. Lack of oil
- c. Faulty oil pump

Bearing improperly seated

*Look
for:*

- a. Dirt between bearing back & bearing seat
- b. Filed parting faces
- c. Filed bearing caps

Connecting rod misalignment

*Look
for:*

- a. Bent or twisted connecting rods

Crankshaft troubles

*Look
for:*

- a. Warped or distorted crankshaft
- b. Ridged & scored journals
- c. Crankpins & journals out-of-round

Excessive bearing clearance

*Look
for:*

- a. Undersize bearing
- b. Excessive oil throw-off
- c. Loss of oil pressure

Low or no oil pressure

*Look
for:*

- a. Insufficient oil in crankcase
- b. Broken oil line
- c. Broken oil pump
- d. Blocked oil suction screen
- e. Broken or plugged oil passage
- f. Broken pressure relief valve springs
- g. Badly worn bearings

1960 New Passenger Car Registrations*

STATE	Buick	Cadillac	Chevrolet	Chrysler	Comet	De Soto	Dodge	Ford	Imperial	Lincoln	Mercury	Oldsmobile	Plymouth	Pontiac	Rambler	Studebaker	All Others	Total	
Alabama.....	Aug. 228	79	2016	54	200	22	285	1450	15	11	114	276	331	379	307	73	573	6415	
8 Mos. 2437	945	19187	578	203	2099	13302	124	141	1255	2882	3115	3231	3184	744	5096	60394			
Alaska.....	Aug. 7	8	88	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	
8 Mos. 54	75	785	55	38	16	76	725	25	12	58	70	460	143	186	69	681	3474		
Arizona.....	Aug. 54	102	986	46	103	5	199	629	17	17	74	157	290	320	82	343	3670		
8 Mos. 526	796	7119	223	543	78	1343	6244	17	18	771	1322	1914	1789	548	682	2881	28000		
Arkansas.....	Aug. 143	64	1239	29	120	14	167	999	6	6	90	199	217	254	206	53	236	4005	
8 Mos. 1105	526	9037	225	467	116	1408	7732	47	87	797	1733	1653	1854	1542	456	1940	30625		
California.....	Aug. 1142	1515	10727	458	1534	123	2600	9955	146	129	966	1917	3672	2385	3592	896	6297	48035	
8 Mos. 11341	11807	96194	3806	9192	1032	20807	93475	1148	1716	8380	16515	29431	20619	29029	7255	50640	413574		
Colorado.....	Aug. 152	79	1458	53	123	14	213	1000	10	16	161	280	286	312	415	118	300	4970	
8 Mos. 1441	778	11174	479	785	144	2253	9119	83	157	1123	2042	2585	2459	3157	856	2966	41591		
Connecticut.....	Aug. 142	139	1780	100	366	30	425	1944	11	12	132	336	637	369	780	185	1060	6068	
8 Mos. 1745	1432	16736	1003	1519	299	3818	12999	146	201	1858	2984	5949	3349	5701	1555	9476	40486		
Delaware.....	Aug. 48	31	591	15	42	6	114	341	1	3	42	82	101	144	109	24	175	1850	
8 Mos. 419	339	4109	145	196	74	871	2618	19	44	277	699	1108	855	739	222	1400	14124		
District of Columbia.....	Aug. 65	67	708	44	66	4	114	420	7	9	44	123	191	143	168	28	340	2543	
8 Mos. 432	572	4998	326	296	64	1022	3359	74	101	332	978	1679	1103	1243	263	2355	19296		
Florida.....	Aug. 500	512	3744	149	548	4	689	3425	48	64	294	719	1064	796	1015	191	2558	16312	
8 Mos. 4846	4467	37122	1256	2615	435	5320	30631	452	767	2580	6444	9245	6913	8166	2199	24239	147772		
Georgia.....	Aug. 143	96	2177	43	217	9	174	999	6	6	103	296	317	355	275	58	11086		
8 Mos. 3049	1422	24683	735	1094	279	3569	20924	126	211	1474	3670	5198	6231	3314	1191	10165	87877		
Hawaii.....	Aug. 50	23	423	9	32	1	81	291	1	1	10	37	193	35	69	19	305	1570	
8 Mos. 249	178	3048	142	134	11	558	2449	18	13	99	293	1783	286	471	242	2483	12457		
Idaho.....	Aug. 83	37	379	19	81	8	102	254	3	5	40	88	104	120	183	38	140	1654	
8 Mos. 627	362	3221	177	251	64	903	2674	45	54	377	792	862	1026	1423	307	1126	14291		
Illinois.....	Aug. 1388	870	10363	362	1163	66	1882	6426	62	123	711	1946	1888	2737	2442	532	1746	34569	
8 Mos. 15141	7894	89087	3827	5900	1086	17304	95349	756	1345	7216	18463	17896	24189	19426	5250	15254	307173		
Indiana.....	Aug. 511	223	259	95	259	2	584	2394	27	211	728	931	728	931	728	931	728	931	
8 Mos. 8242	2465	35072	1319	2018	643	7350	25613	285	396	3063	8182	7980	8788	7535	4055	5835	128255		
Iowa.....	Aug. 289	119	2261	53	246	29	378	1918	5	16	180	396	467	373	579	101	287	7695	
8 Mos. 2429	538	16389	631	1006	239	3298	12622	84	199	1625	3017	3774	3279	4023	885	2306	56422		
Kansas.....	Aug. 326	97	2243	67	168	21	371	1710	12	18	163	383	422	383	493	128	384	7369	
8 Mos. 2577	925	16396	585	813	197	3070	13367	100	167	1336	3620	3360	3483	3865	1027	3224	57471		
Kentucky.....	Aug. 232	91	1549	39	151	16	241	1232	12	5	116	391	397	329	408	56	369	5524	
8 Mos. 2092	691	19182	385	914	186	2281	12326	265	400	3388	6139	3988	3139	3088	972	286	110620		
Louisiana.....	Aug. 253	134	2615	64	239	14	259	1713	14	14	153	438	266	560	358	75	521	7913	
8 Mos. 2257	1065	16222	505	1077	206	2319	15095	120	141	1282	3618	2790	4541	2803	710	5834	63555		
Maine.....	Aug. 48	30	502	13	50	7	80	448	2	1	38	64	129	97	171	46	236	1962	
8 Mos. 685	331	5961	194	378	102	1011	4485	26	40	522	692	1233	1080	1892	496	2189	21609		
Maryland.....	Aug. 276	150	3474	138	274	38	746	2578	21	14	134	434	996	480	793	160	977	11683	
8 Mos. 2821	1336	24017	1082	1321	406	5342	17014	160	159	1456	3286	7404	4287	5435	1236	6940	83448		
Massachusetts.....	Aug. 434	244	3508	153	475	50	747	3157	19	46	221	586	962	995	1480	253	1299	14351	
8 Mos. 4169	2597	27781	1596	2134	590	7279	24124	265	400	2636	6291	9314	5626	6139	2903	10774	110620		
Michigan.....	Aug. 1396	594	8482	288	1554	76	1657	7891	37	140	794	1662	1994	2062	1548	253	1967	32347	
8 Mos. 14077	6350	76880	2689	8204	1196	19435	71494	612	1079	9737	16293	20376	21438	2784	2784	12692	302132		
Minnesota.....	Aug. 442	146	3014	137	371	37	533	2440	27	56	247	739	732	678	892	226	554	11291	
8 Mos. 4086	1865	23770	1113	1553	407	5201	18516	175	267	2307	5597	6895	5725	6230	1896	4450	89733		
Mississippi.....	Aug. 156	50	1201	33	76	10	106	731	7	6	55	208	193	233	169	43	219	3501	
8 Mos. 1425	409	9058	270	353	95	1086	6652	34	53	542	1044	1724	1843	1296	448	2629	29163		
Missouri.....	Aug. 513	204	4822	126	359	46	1145	3393	17	27	223	730	901	1067	1159	367	586	15851	
8 Mos. 3956	1989	26200	959	1503	636	23957	8264	201	235	1964	5332	6799	6346	6723	1342	600	13851		
Montana.....	Aug. 63	32	499	20	60	10	152	408	4	5	64	108	115	114	159	29	133	1995	
8 Mos. 761	340	3827	141	294	70	1060	3330	46	47	528	858	982	779	1175	314	1949	15701		
Nebraska.....	Aug. 126	80	1314	65	93	11	272	1084	8	5	107	229	215	203	349	61	188	4407	
8 Mos. 1300	673	10558	400	476	129	2418	8313	62	58	913	1617	2073	1929	2497	519	1507	35942		
Nevada.....	Aug. 32	35	199	21	43	2	64	207	4	10	36	50	71	81	80	16	173	1134	
8 Mos. 174	231	1463	100	180	27	444	1434	31	97	334	349	464	540	540	149	1221	7733		
New Hampshire.....	Aug. 17	77	8	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	
8 Mos. 514	262	4601	150	379	49	1094	3576	28	50	456	614	1059	714	1649	540	2177	17820		
New Jersey.....	Aug. 607	611	5187	361	801	80	1283	4089	53	71	321	838	1484	1153	1884	318	1822	21058	
8 Mos. 6403	5559	45743	3671	3728	1061	12340	33582	682	777	3862	9387	14956	11336	32752	3286	15799	185693		
New Mexico.....	Aug. 78	64	723	33	51	12	99	624	5	7	57	112	168	134	175	41	175	2588	
8 Mos. 631	407	5077	249	310	64	716	4182	53	45	459	1016	1247	1086	1176	339	1546	18655		
New York.....	Aug. 1653	1396	12640	844	2130	164	3156	10423	133	162	830	2464	3964	2968	4477	996	5306	43780	
8 Mos. 16722	12502	99149	8061	8566	2099	28943	77043	1329	1555	9134	24861	36144	26881	32137	8394	39149	428703		
North Carolina.....	Aug. 354	165	2422	30	24	2	256	1456	17	136	242	559	622	413	580	91	412	3480	
8 Mos. 3289	1292	22341	763	1346	259	3347	20715	110	147	1443	3510	5080	4807	3528	1219	7280	80185		
North Dakota.....	Aug. 56	21	373	24	56	4	93	338	4	6	46	79	106	81	116	25	81	1493	
8 Mos. 473	192	3616	234	278	72	875	3166	33	33	493	808	1014	642	803	209	430	13371		
Ohio.....	Aug. 1263	826	9453	261	1723	68	2168	7015	71	71	738	1703	2272	2256	2075	493	1744	33638	
8 Mos. 12403	5121	75750	2897	8247	1275	20263	62498	599	722	8103	15397	21022	19490	16544	4420	15741	290482		
Oklahoma.....	Aug. 199	105	1967	55	128	12	256	1476	7	8	120	347	255	421	395	76	255	6084	
8 Mos. 1853	832	14371	380	1416	156	11416	7474	74	114	962	2442</								

1961 Tune Up—Alignment Specifications

All models shown are 1961 Production Models with the exception of Rambler, Superba, Comet, Falcon, Ford, Lincoln, Mercury and Cadillac which are 1960 Production Models.

MAKE AND MODEL	No. of cylinders Bore and (In.)	ENGINE		TUNE-UP DATA										FRONT END ALIGNMENT			
		Maximum Brake H.P.	Spark Plug Make and Size (mm.)	VALVES				IGNITION						Steering Axis Inclination (Deg.)	Caster (Deg.)	Camber (Deg.)	Toe-In (In.)
				Seat Angle		Clearance Tappet Operating		Breaker Point Gap (In.)	Cam Angle (Deg.)	Spark Plug Gap (In.)	Timing Spark Occurs T.C.						
				Inlet (Deg.)	Exhaust (Deg.)	Inlet (In.)	Exhaust (In.)										
AMERICAN MOTORS CORP.																	
Rambler American 8-6001 Deluxe, Super	8-3 1/2 x 4 1/2	90	CA-14	45	45	.016C	.018C	.020	39	.035	3B	8	0 to 1 1/2 P	1 1/2 N to 1 1/2 P	1 1/2 N to 1 1/2 P	1 1/2 N to 1 1/2 P	
..... American 8-6001 Custom	8-3 1/2 x 4 1/2	125	CA-14	45	45	.012H	.016H	.016	32	.035	8B	8	0 to 1 1/2 P	1 1/2 N to 1 1/2 P	1 1/2 N to 1 1/2 P	1 1/2 N to 1 1/2 P	
..... Six 8-6010	8-3 1/2 x 4 1/2	127	CA-14	45	45	.012H	.016H	.016	32	.035	8B	6 11'	0 to 1 1/2 P	1 1/2 N to 1 1/2 P	1 1/2 N to 1 1/2 P	1 1/2 N to 1 1/2 P	
..... Rebel 8-6020	8-3 1/2 x 3 1/2	200	CA-14	30	45	.012H	.014H	.017	30	.035	TC	6 11'	0 to 1 1/2 P	1 1/2 N to 1 1/2 P	1 1/2 N to 1 1/2 P	1 1/2 N to 1 1/2 P	
..... Ambassador 8-6080	8-4 x 3 1/2	250	CA-14	30	45	Hyd	Hyd	.017	30	.035	TC	6 11'	0 to 1 1/2 P	1 1/2 N to 1 1/2 P	1 1/2 N to 1 1/2 P	1 1/2 N to 1 1/2 P	
CHECKER MOTORS CORP.																	
Superba..... A-10L	6-3 1/2 x 4 1/2	90	Ch-18	30	44	.014H	.014H	.020	39	.029	4B	7	2P	1 1/2 P to 1 1/2 P	1 1/2 P to 1 1/2 P	1 1/2 P to 1 1/2 P	
..... A-10	6-3 1/2 x 4 1/2	122	Ch-14	30	44	.017H	.023H	.020	39	.033	3 1/2 B	7	2P	1 1/2 P to 1 1/2 P	1 1/2 P to 1 1/2 P	1 1/2 P to 1 1/2 P	
CHRYSLER CORP.																	
Chrysler..... Newport 8-RC1-L	8-4 1/2 x 3 1/2	265	AL-14	45	45	Hyd	Hyd	.017	30	.035	10B	8 1/2	0 to 1N	1 1/2 P to 1 1/2 P	1 1/2 P to 1 1/2 P	1 1/2 P to 1 1/2 P	
..... Windsor 8-RC2-M	8-4 1/2 x 3 1/2	305	AL-14	45	45	Hyd	Hyd	.017	30	.035	10B	8 1/2	0 to 1N	1 1/2 P to 1 1/2 P	1 1/2 P to 1 1/2 P	1 1/2 P to 1 1/2 P	
..... New Yorker 8-RC3-H	8-4 1/2 x 3 1/2	350	AL-14	45	45	Hyd	Hyd	.017	30	.035	10B	8 1/2	0 to 1 1/2 P	1 1/2 P to 1 1/2 P	1 1/2 P to 1 1/2 P	1 1/2 P to 1 1/2 P	
De Soto..... 8-RS1-L	8-4 1/2 x 3 1/2	265	AL-14	45	45	Hyd	Hyd	.017	30	.035	10B	8 1/2	0 to 1N	1 1/2 P to 1 1/2 P	1 1/2 P to 1 1/2 P	1 1/2 P to 1 1/2 P	
Dodge..... Polara 8-RD1-L	8-4 1/2 x 3 1/2	265	AL-14	45	45	Hyd	Hyd	.017	30	.035	10B	8 1/2	0 to 1N	1 1/2 P to 1 1/2 P	1 1/2 P to 1 1/2 P	1 1/2 P to 1 1/2 P	
..... 8-RD1-L (Engine Option)	8-4 1/2 x 3 1/2	325	AL-14	45	45	Hyd	Hyd	.017	30	.035	7 1/2 B	8 1/2	0 to 1N	1 1/2 P to 1 1/2 P	1 1/2 P to 1 1/2 P	1 1/2 P to 1 1/2 P	
Dodge Dart..... Seneca 8-RD3-L	8-4 1/2 x 3 1/2	145	AL-14	45	45	.010H	.020H	.020	43	.035	2 1/2 B	8 1/2	0 to 1N	1 1/2 P to 1 1/2 P	1 1/2 P to 1 1/2 P	1 1/2 P to 1 1/2 P	
..... Pioneer 8-RD3-M, Phoenix 8-RD3-A	8-3 1/2 x 3 1/2	230	AL-14	45	45	.010H	.018H	.017	30	.035	5B	8 1/2	0 to 1N	1 1/2 P to 1 1/2 P	1 1/2 P to 1 1/2 P	1 1/2 P to 1 1/2 P	
..... Seneca 8-RD4-L, Pioneer 8-RD4-M	8-3 1/2 x 3 1/2	265	AL-14	45	45	.010H	.018H	.017	30	.035	10B	8 1/2	0 to 1N	1 1/2 P to 1 1/2 P	1 1/2 P to 1 1/2 P	1 1/2 P to 1 1/2 P	
..... Phoenix 8-RD4-H	8-3 1/2 x 3 1/2	305	AL-14	45	45	Hyd	Hyd	.017	30	.035	10B	8 1/2	0 to 1N	1 1/2 P to 1 1/2 P	1 1/2 P to 1 1/2 P	1 1/2 P to 1 1/2 P	
..... 8-RD4-L, RD4-M, RD4-H (Engine Option)	8-4 1/2 x 3 1/2	330	AL-14	45	45	Hyd	Hyd	.017	30	.035	7 1/2 B	8 1/2	0 to 1N	1 1/2 P to 1 1/2 P	1 1/2 P to 1 1/2 P	1 1/2 P to 1 1/2 P	
..... 8-RD4-L, RD4-M, RD4-H (Engine Option)	8-4 1/2 x 3 1/2	330	AL-14	45	45	Hyd	Hyd	.017	30	.035	7 1/2 B	8 1/2	0 to 1N	1 1/2 P to 1 1/2 P	1 1/2 P to 1 1/2 P	1 1/2 P to 1 1/2 P	
Dodge Lancer..... 170 8-RW1-L, 770 8-RW1-H	8-3 1/2 x 3 1/2	101	AL-14	46	46	.010H	.020H	.020	43	.035	2 1/2 B	7 1/2	0 to 1N	1 1/2 P to 1 1/2 P	1 1/2 P to 1 1/2 P	1 1/2 P to 1 1/2 P	
..... 8-RW1-L, RW1-H (Engine Option)	8-3 1/2 x 3 1/2	145	AL-14	46	46	.010H	.020H	.020	43	.035	2 1/2 B	7 1/2	0 to 1N	1 1/2 P to 1 1/2 P	1 1/2 P to 1 1/2 P	1 1/2 P to 1 1/2 P	
Imperial..... Custom 8-RY1-L	8-4 1/2 x 3 1/2	350	AL-14	45	45	Hyd	Hyd	.017	30	.035	10B	8 1/2	1 1/2 P to 1 1/2 P	1 1/2 P to 1 1/2 P	1 1/2 P to 1 1/2 P	1 1/2 P to 1 1/2 P	
..... Crown 8-RY1-M, Le Baron 8-RY1-H	8-4 1/2 x 3 1/2	145	AL-14	46	46	.010H	.020H	.020	43	.035	2 1/2 B	8 1/2	0 to 1N	1 1/2 P to 1 1/2 P	1 1/2 P to 1 1/2 P	1 1/2 P to 1 1/2 P	
Plymouth..... Savoy 8-RP1-L	8-3 1/2 x 3 1/2	230	AL-14	45	45	.010H	.018H	.017	30	.035	5B	8 1/2	0 to 1N	1 1/2 P to 1 1/2 P	1 1/2 P to 1 1/2 P	1 1/2 P to 1 1/2 P	
..... Belvedere 8-RP1-M, Fury 8-RP1-H	8-3 1/2 x 3 1/2	305	AL-14	45	45	Hyd	Hyd	.017	30	.035	10B	8 1/2	0 to 1N	1 1/2 P to 1 1/2 P	1 1/2 P to 1 1/2 P	1 1/2 P to 1 1/2 P	
..... Savoy 8-RP2-L, Belvedere 8-RP2-M	8-4 1/2 x 3 1/2	325	AL-14	45	45	Hyd	Hyd	.017	30	.035	7 1/2 B	8 1/2	0 to 1N	1 1/2 P to 1 1/2 P	1 1/2 P to 1 1/2 P	1 1/2 P to 1 1/2 P	
..... Fury 8-RP2-H	8-4 1/2 x 3 1/2	330	AL-14	45	45	Hyd	Hyd	.017	30	.035	7 1/2 B	8 1/2	0 to 1N	1 1/2 P to 1 1/2 P	1 1/2 P to 1 1/2 P	1 1/2 P to 1 1/2 P	
..... 8-RP2-L, RP2-M, RP2-H (Engine Option)	8-4 1/2 x 3 1/2	330	AL-14	45	45	Hyd	Hyd	.017	30	.035	7 1/2 B	8 1/2	0 to 1N	1 1/2 P to 1 1/2 P	1 1/2 P to 1 1/2 P	1 1/2 P to 1 1/2 P	
..... 8-RP2-L, RP2-M, RP2-H (Engine Option)	8-4 1/2 x 3 1/2	330	AL-14	45	45	Hyd	Hyd	.017	30	.035	7 1/2 B	8 1/2	0 to 1N	1 1/2 P to 1 1/2 P	1 1/2 P to 1 1/2 P	1 1/2 P to 1 1/2 P	
Valiant..... V-100 8-RV1-L, V-200 8-RV1-H	8-3 1/2 x 3 1/2	101	AL-14	46	46	.010H	.020H	.020	43	.035	2 1/2 B	7 1/2	0 to 1N	1 1/2 P to 1 1/2 P	1 1/2 P to 1 1/2 P	1 1/2 P to 1 1/2 P	
FORD MOTOR CO.																	
Comet..... 8	6-3 1/2 x 2 1/2	90	Ch-18	45	45	.016H	.018H	.025	37	.034	2B	7	1P to 2P	1 1/2 P to 1 1/2 P	1 1/2 P to 1 1/2 P	1 1/2 P to 1 1/2 P	
Edsel..... 8	6-3 1/2 x 3 1/2	145	Ch-18	45	45	.019H	.019H	.025	37	.034	4B	8 1/2	1 1/2 N to 1 1/2 P	1 1/2 P to 1 1/2 P	1 1/2 P to 1 1/2 P	1 1/2 P to 1 1/2 P	
..... Ranger 8	8-3 1/2 x 3 1/2	185	Ch-18	45	45	.019H	.019H	.015	27	.034	3B	8 1/2	1 1/2 N to 1 1/2 P	1 1/2 P to 1 1/2 P	1 1/2 P to 1 1/2 P	1 1/2 P to 1 1/2 P	
..... 8 (Engine Option)	8-4 x 3 1/2	300	Ch-18	60	45	Hyd	Hyd	.015	27	.034	3B	8 1/2	1 1/2 N to 1 1/2 P	1 1/2 P to 1 1/2 P	1 1/2 P to 1 1/2 P	1 1/2 P to 1 1/2 P	
Falcon..... 8	6-3 1/2 x 2 1/2	90	Ch-18	45	45	.016H	.018H	.025	37	.034	2B	7	1P to 2P	1 1/2 P to 1 1/2 P	1 1/2 P to 1 1/2 P	1 1/2 P to 1 1/2 P	
Ford..... Fairlane, Fairlane 500, Galaxie 8	6-3 1/2 x 3 1/2	145	Ch-18	45	45	.019H	.019H	.025	37	.034	4B	8 1/2	1 1/2 N to 1 1/2 P	1 1/2 P to 1 1/2 P	1 1/2 P to 1 1/2 P	1 1/2 P to 1 1/2 P	
..... Fairlane, Fairlane 500, Galaxie 8	8-3 1/2 x 3 1/2	185	Ch-18	45	45	.019H	.019H	.015	27	.034	3B	8 1/2	1 1/2 N to 1 1/2 P	1 1/2 P to 1 1/2 P	1 1/2 P to 1 1/2 P	1 1/2 P to 1 1/2 P	
..... All Models (Engine Option)	8-4 x 3 1/2	300	Ch-18	60	45	Hyd	Hyd	.015	27	.034	3B	8 1/2	1 1/2 N to 1 1/2 P	1 1/2 P to 1 1/2 P	1 1/2 P to 1 1/2 P	1 1/2 P to 1 1/2 P	
..... All Models (Engine Option)	8-4 x 3 1/2	300	Ch-18	60	45	Hyd	Hyd	.015	27	.034	3B	8 1/2	1 1/2 N to 1 1/2 P	1 1/2 P to 1 1/2 P	1 1/2 P to 1 1/2 P	1 1/2 P to 1 1/2 P	
..... Thunderbird 8 (Engine Option)	8-4 1/2 x 3 1/2	350	Ch-18	45	45	Hyd	Hyd	.015	27	.034	4B	8 1/2	1 1/2 N to 1 1/2 P	1 1/2 P to 1 1/2 P	1 1/2 P to 1 1/2 P	1 1/2 P to 1 1/2 P	
Lincoln..... Lincoln, Premiere, Continental 8	8-4 1/2 x 3 1/2	315	Ch-18	45	45	Hyd	Hyd	.015	27	.034	6B	7 20'	0 to 1 1/2 N	0 to 1 1/2 P	0 to 1 1/2 P	0 to 1 1/2 P	
Mercury..... Monterey 8	8-3 1/2 x 3 1/2	205	Ch-18	45	45	.018H	.018H	.015	27	.034	3B	7	0 to 1 1/2 N	0 to 1 1/2 P	0 to 1 1/2 P	0 to 1 1/2 P	
..... Monterey 8 (Engine Option)	8-4 1/2 x 3 1/2	280	Ch-18	45	45	.....	.....	.015	27	.034	6B	7	0 to 1 1/2 N	0 to 1 1/2 P	0 to 1 1/2 P	0 to 1 1/2 P
..... Montclair, Park Lane 8	8-4 1/2 x 3 1/2	310	Ch-18	45	45	Hyd	Hyd	.015	27	.034	6B	7	0 to 1 1/2 N	0 to 1 1/2 P	0 to 1 1/2 P	0 to 1 1/2 P	
GENERAL MOTORS CORP.																	
Buick..... Special 8-4000, 4100	8-3 1/2 x 2 1/2	155	AC-14	45	45	Hyd	Hyd	.016	30	.033	7 1/2 B	7 1/2	1 1/2 N to 1 1/2 N	1 1/2 N to 1 1/2 P	1 1/2 N to 1 1/2 P	1 1/2 N to 1 1/2 P	
..... Le Sabre 8-4400	8-4 1/2 x 3 1/2	280	AC-14	45	45	Hyd	Hyd	.016	30	.033	12B	9 52'	1 1/2 N to 1 1/2 N	0 to 1 1/2 P	0 to 1 1/2 P	0 to 1 1/2 P	
..... Electra 8-4700	8-4 1/2 x 3 1/2	325	AC-14	45	45	Hyd	Hyd	.016	30	.033	12B	9 52'	1 1/2 N to 1 1/2 N	0 to 1 1/2 P	0 to 1 1/2 P	0 to 1 1/2 P	
Cadillac..... 8-60, 62, 63, 75	8-4 x 3 1/2	325	AC-14	44	44	Hyd	Hyd	.016	30	.035	5B	8	1 1/2 N to 1 1/2 N	1 1/2 N to 1 1/2 P	1 1/2 N to 1 1/2 P	1 1/2 N to 1 1/2 P	
Chevrolet..... Biscayne 8-1100	8-3 1/2 x 3 1/2	135	AC-14	31	46	Hyd	Hyd	.019	32	.036	5B	7 11'	1 1/2 N to 1 1/2 P	0 to 1P	0 to 1P	0 to 1P	
..... Biscayne Fleetmaster 8-1300	8-3 1/2 x 3 1/2	170	AC-14	46	4												
..... Biscayne 8-1200	8-3 1/2 x 3 1/2	170	AC-14	46	46	Hyd	Hyd	.019	30	.036	4B	7 11'	1 1/2 N to 1 1/2 P	0 to 1P	0 to 1P	0 to 1P	
..... Biscayne Fleetmaster 8-1400	8-4 1/2 x 3 1/2	250	AC-14	46	46	Hyd	Hyd	.019	30	.036	8B	7 11'	1 1/2 N to 1 1/2 P	0 to 1P	0 to 1P	0 to 1P	
..... Biscayne Fleetmaster 8-1600	8-4 1/2 x 3 1/2	250	AC-14	46	46	Hyd	Hyd	.019	30	.036	8B	7 11'	1 1/2 N to 1 1/2 P	0 to 1P	0 to 1P	0 to 1P	
..... Biscayne Fleetmaster 8-1800	8-4 1/2 x 3 1/2	250	AC-14	46	46	Hyd	Hyd	.019	30	.036	8B	7 11'	1 1/2 N to 1 1/2 P	0 to 1P	0 to 1P	0 to 1P	
..... Biscayne Fleetmaster 8-2000	8-4 1/2 x 3 1/2	250	AC-14	46	46	Hyd	Hyd	.019	30	.036	8B	7 11'	1 1/2 N to 1 1/2 P	0 to 1P	0 to 1P	0 to 1P	
..... Biscayne Fleetmaster 8-2200	8-4 1/2 x 3 1/2	250	AC-14	46	46	Hyd	Hyd	.019	30	.036	8B	7 11'	1 1/2 N to 1 1/2 P	0 to 1P	0 to 1P	0 to 1P	
..... Biscayne Fleetmaster 8-2400	8-4 1/2 x 3 1/2	250	AC-14	46	46	Hyd	Hyd	.019	30	.036	8B	7 11'	1 1/2 N to 1 1/2 P	0 to 1P	0 to 1P	0 to 1P	
..... Biscayne Fleetmaster 8-2600	8-4 1/2 x 3 1/2	250	AC-14	46	46	Hyd	Hyd	.019	30	.036	8B	7 11'	1 1/2 N to 1 1/2 P	0 to 1P	0 to 1P	0 to 1P	
..... Biscayne Fleetmaster 8-2800	8-4 1/2 x 3 1/2	250	AC-14	46	46	Hyd	Hyd	.019	30	.036	8B	7 11'	1 1/2 N to 1 1/2 P	0 to 1P	0 to 1P	0 to 1P	
..... Biscayne Fleetmaster 8-3000	8-4 1/2 x 3 1/2	250	AC-14	46	46	Hyd	Hyd	.019	30	.036	8B	7 11'	1 1/2 N to 1 1/2 P	0 to 1P	0 to 1P	0 to 1P	
..... Biscayne Fleetmaster 8-3200	8-4 1/2 x 3 1/2	250	AC-14	46	46	Hyd	Hyd	.019	30	.036	8B	7 11'	1 1/2 N to 1 1				

READER'S

CLEARING

HOUSE

MOTOR AGE CLINIC

for troubleshooting

BY JACK MONTGOMERY, TECHNICAL EDITOR

Carburetor Trouble on a 1951 Model Olds' 88

We are confronted with a difficult problem involving a carburetor on a 1951 model Olds 88. The trouble is that quite often when bringing the car to a stop or to idle, it will stall. Then it is hard to start again as the intake manifold gets loaded with gas which pours in two streams from the carburetor main discharge nozzles. The original carburetor on this car was serviced with a repair kit in September 1956. It ran perfectly until last summer when the stalling problem started. We installed a rebuilt carburetor in February of this year. It did the same thing. Finally we decided to really dig into this. We performed a valve grind job on the motor, installed new hydraulic lifters, new points, plugs, condenser, etc. We installed new ignition wiring and a new carburetor. All this we did last May. It ran fine for about six weeks. Then the stalling and loading up with gas problem came back. We have checked the carburetor thoroughly for float level, drop, pontoon centering, needle and seat and all the other adjustments. All checked out OK. Also we put on a new fuel pump and it is producing the proper $4\frac{1}{2}$ lbs. of pressure with engine running. Can you help us? Why should gas pour out of the main discharge nozzles when engine stalls or is stopped?

Robert A. Merrill
Warren's Sales & Service
Eastford, Conn.

ASSUMING that all the modifications have been taken care of correctly, the trouble must still center around the needle valve. A lot of complaints of flooding have been caused by the presence of iron oxide in the system. This can be eliminated by installing a magnetic trap type filter. Also lowering the float about $\frac{1}{32}$ nd of an inch. Make sure the heat damper valve is free and operating properly.

Low Oil Pressure In Overhauled Chevy V-8 Engine

Our shop recently performed a complete major overhaul on a '55 Chev. V-8. It consisted of the following work: connecting rod and main bearings bored .030" over with new pistons and rings. Seats and valves refaced, blocked boiled and oil passages cleaned, and a new oil pump installed. The pump was furnished in a stock Chev. kit as one superseding the original pump and screen. There now seems to be an oiling problem at idle speed. Using 20w oil and when engine is started and run cold, the oil pressure is between 15-20 p.s.i. at idle, but when the temp. reaches 180° F, the pressure has dropped to about 4-5 p.s.i. pressure at 450 R.P.M. Off idle it immediately rises until finally reaching the specified 35-40 p.s.i. at 2000 R.P.M. The oil passage on the distributor body has been checked for proper indexing with the oil gallery, and lifter noise

(mech. type with standard transmission) does not seem excessive. Can you furnish any clues as to what might be causing the lower oil pressure?

Howard Bedford
Automotive Service
San Carlos, California

I WOULD say if the oil pressure is reaching the 35 to 40 lbs. per square inch at two thousand RPM's you do not have too much to worry about. But if you would like to increase this on the idle, you could do it by increasing the tension on the oil relief valve spring. You can either stretch this spring at the spacer, or in some cases there are heavier springs which you can buy. I would suggest also, while the pan is off, to make an oil pressure test on it. Use the lightest oil you can get; say 5W or 10W. Install your oil pressure tester and observe where the oil is leaking from the various bearings. If excessive at any one point, I would check the bearings for looseness.

1956 Ford Wanders On Paved or Gravel Roads

I have a steering problem on a 1956 Ford Country Squire Wagon. On a paved road this car has a wander over several hundred yards of road. On a gravel road the wander is more pronounced. To date we have performed the following service work. Checked front suspension for worn or damaged parts, and replaced steering sector shaft

Continued on page 84

CURRENT PASSENGER CAR PRICE, WEIGHT AND BODY TABLE

Following are prices at factory for cars with standard equipment as of Oct. 25, 1960
State or local taxes, transportation and finance charges and optional equipment are extra.

BODY MAKE AND MODEL	AMERICAN MOTOR CORP.				BODY MAKE AND MODEL	CHRYSLER CORP., cont'd				BODY MAKE AND MODEL	FORD MOTOR CO., cont'd				BODY MAKE AND MODEL	GENERAL MOTORS CORP., cont'd			
	List Price at Factory without Federal Taxes	Federal Taxes and Handling Charges	Suggested Price at Factory including Federal Taxes	Shipping Weight		List Price at Factory without Federal Taxes	Federal Taxes and Handling Charges	Suggested Price at Factory including Federal Taxes	Shipping Weight		List Price at Factory without Federal Taxes	Federal Taxes and Handling Charges	Suggested Price at Factory including Federal Taxes	Shipping Weight		List Price at Factory without Federal Taxes	Federal Taxes and Handling Charges	Suggested Price at Factory including Federal Taxes	Shipping Weight
AMERICAN MOTOR CORP.																			
RAMBLER																			
DeLuxe																			
Sedan, 2d.....	1846																		
Sedan, 4d.....	1894																		
Sta. Wagon, 2d.....	2080																		
Sta. Wagon, 4d.....	2129																		
Super-8																			
Sedan, 2d.....	1930																		
Sedan, 4d.....	1979																		
Sta. Wagon, 2d.....	2165																		
Sta. Wagon, 4d.....	2214																		
Custom-8																			
Sedan, 2d.....	2080																		
Sedan, 4d.....	2109																		
Sta. Wag., 2d.....	2295																		
Sta. Wag., 4d.....	2344																		
Convertible.....	2369																		
Classic-6																			
DeLuxe																			
Sedan, 4d.....	2096																		
Sta. Wag., 4d, 2s.	2437																		
Super																			
Sedan, 4d.....	2268																		
Sta. Wag., 4d, 2s.	2572																		
Sta. Wag., 4d, 3s.	2697																		
Custom																			
Sedan, 4d.....	2413																		
Sta. Wag., 4d, 2s.	2717																		
Sta. Wag., 5d, 3s.	2942																		
Classic-V8																			
Super																			
Sedan, 4d.....	2397																		
Sta. Wag., 4d, 2s.	2701																		
Sta. Wag., 5d, 3s.	2826																		
Custom																			
Sedan, 4d.....	2512																		
Sta. Wag., 4d, 2s.	2816																		
Sta. Wag., 5d, 3s.	2941																		
Ambas-V8																			
Super																			
Sedan, 4d.....	2537																		
Sta. Wag., 4d, 2s.	2841																		
Sta. Wag., 5d, 3s.	2966																		
Custom																			
Sedan, 4d.....	2682																		
Sta. Wag., 4d, 2s.	2986																		
Sta. Wag., 5d, 3s.	3111																		
CHRYSLER CORP.																			
CHRYSLER																			
Newport																			
Sedan, 4d.....	2693	271	2864	3710															
Hardtop, 2d.....	2750	275	3025	3860															
Hardtop, 4d.....	2824	280	3104	3730															
Convertible.....	3137	306	3442	3760															
Sta. Wag., 2s.....	3230	311	3541	4070															
Sta. Wag., 3s.....	3305	317	3622	4155															
Windser																			
Sedan, 4d.....	2920	298	3216	3730															
Hardtop, 2d.....	2989	294	3263	3710															
Hardtop, 4d.....	3059	308	3367	3785															
New Yorker																			
Sedan, 4d.....	3752	371	4123	4055															
Hardtop, 2d.....	3800	375	4176	4065															
Hardtop, 4d.....	3980	381	4261	4100															
Convertible.....	4158	404	4582	4070															
Sta. Wag., 2s.....	4448	416	4784	4425															
Sta. Wag., 3s.....	4448	423	4871	4455															
300-G																			
Hardtop, 2d.....	4982	486	5411	4260															
Convertible.....	5352	488	5841	4315															
DE SOTO																			
Hardtop, 2d.....	2827	226	3062																
Hardtop, 4d.....	2988	229	3117																
DODGE DART:																			
Seneca-V8																			
Sedan, 2d.....	2187	210	2387	3470															
Sedan, 4d.....	2235	214	2449	3515															
Sta. Wag., 4d, 6p	2975	240	2615	3820															
Pioneer-V8																			
Sedan, 2d.....	2310	220	2530	3480															
Sedan, 4d.....	2355	223	2578	3510															
Hardtop, 2d.....	2382	225	2607	3500															
Sta. Wag., 4d, 6p	2660	246	2906	3940															
Sta. Wag., 4d, 8p	2758	253	3011	4005															
Convertible-V8																			
Sedan, 4d.....	2462	233	2715	3535															
Hardtop, 2d.....	2503	234	2737	3520															
Hardtop, 4d.....	2565	236	2786	3555															
Convertible.....	2736	252	2968	3580															
DODGE																			
Polara-V8																			
Sedan, 4d.....	2796			3700															
Hardtop, 2d.....	2787			3690															
Hardtop, 4d.....	2940			3740															
CHRYSLER CORP., cont'd																			
DODGE, cont'd																			
Convertible.....	2972	...		3785															
Sta. Wagon, 8p...	3011	...		4115															
Sta. Wagon, 8p...	3118	...		4128															
IMPERIAL																			
Custom																			
Southamp., 2d..	4481	442	4923	4715															
Southamp., 4d..	4854	456	5106	4746															
Crown																			
Southamp., 2d..	4928	475	5403	4780															
Southamp., 4d..	5195	492	5647	4985															
Convertible.....	5273	861	5774	4885															
Le Baron																			
Southamp., 4d..	5870	556	6426	4875															
LANCER																			
170																			
Sedan, 2d.....	1832	...		2585															
Sedan, 4d.....	1898	...		2595															
Wagon, 6p.....	2179	...		2760															
770																			
Sedan, 4d.....	1966	...		2805															
Hardtop, 2d....	1993	...		2985															
Wagon, 6p.....	2257	...		2775															
PLYMOUTH††																			
Savoy-V8																			
Sedan, 2d.....	2170	174	2344																
Sedan, 4d.....	2217	178	2395																
Belvedere-V8																			
Sedan, 2d.....	2290	163	2473																
Sedan, 4d.....	2337	187	2524																
Hardtop, 4d....	2387	188	2545																
Fury-V8																			
Sedan, 4d.....	2463	186	2659																
Hardtop, 2d....	2536	202	2740																
Convertible.....	2717	215	2932																
Suburban-V8																			
DeLuxe, 2d, 6p.	2486	186	2686																
DeLuxe, 4d, 6p.	2550	203	2753																
Custom, 4d, 6p.	2636	209	2845																
Custom, 4d, 8p.	2738	217	2945																
Sport, 4d, 6p.	2770	216	2989																
Sport, 4d, 9p.	2872	227	3099																
VALLIANT																			
V-100																			
Sedan, 2d.....	1782	...		...												
Sedan, 4d.....	1838	...		...												
Sta. Wag., 2s....	2126	...		...												
V-200																			
Sedan, 4d.....	1827	...		...												
Hardtop, 2d....	1952	...		...												
Sta. Wag., 2s....	2217	...		...												
FORD MOTOR CO.																			
COMET																			
Sedan, 2d.....	1630	168	1996	2399															
Sedan, 4d.....	1880	173	2053	2432															
Sta. Wag., 2d....	2119	181	2310	2548															
Sta. Wag., 4d....	2188	...		2681															
FALCON																			
Tudor.....	1746	166	1912	2259															
Fordor.....	1803	171	1974	2268															
Sta. Wagon, 2d.	2036	189	2225																
Sta. Wagon, 4d.	2074	194	2268																
FORD†																			
Fairlane-V8																			
Tudor Sedan...	2163	214	2377																
Fordor Sedan...	2213	218	2431																
Fairlane 500-V8																			
Tudor Sedan...	2270	222	2492																
Fordor Sedan...	2320	226	2546																
Tudor Sedan...	2420	232	2652																
Fordor Sedan...	2470	236	2706																
Club Vict.....	2476	237	2713																
Town Vict.....	2536	242	2776																
Starliner.....	2476	237	2713																
Sunliner.....	2706	256	2963																
Tudor Ranch...	2465	237	2702																
Fordor Ranch...	2530	242	2772																
Ctry. Sed., 4d, 6p	2619	249	2868																
Ctry. Sed., 4d, 8p	2717	255	2972																
Ctry. Squire, 6p.	2795	262	3057																
Ctry. Squire.....	2860	267	3127																
THUNDERBIRD																			
Hardtop.....	3428	329	3755	3796															
Convertible.....	3860	382	4222	3897															
FORD MOTOR CO., cont'd																			
LINCOLN																			
Lincoln																			
Hardtop, 2d....	2486	...		...												
Sedan, 4d.....	2526	...		...												
Hardtop, 4d....	2582	...		...												
Premiere																			
Hardtop, 2d....	2687	...		...												
Sedan, 4d.....	2739	...		...												
Continental																			
Hardtop, 2d....	2835	...		...												
Sedan, 4d.....	2885	...		...												
Hardtop, 4d....	2931	...		...												
Convertible.....	3088	...		...												
Town Car																			
Limousine																			
MERCURY																			
Meteor-6																			
600																			
Sedan, 2d.....	2201	...		...												
Sedan, 4d.....	2251	...		...												
800																			
Sedan, 2d.....	2367	...		...												
Sedan, 4d.....	2417	...		...												
Hardtop, 2d....	2473	...		...												
Hardtop, 4d....	2483	...		...												
Sta. Wag.....	2582	...		...												
Meteor-8																			
600																			
Sedan, 2d.....	2369	...		...												
Sedan, 4d.....	2389	...		...												
800																			
Sedan, 2d.....	2475	...		...												
Sedan, 4d.....	2525	...		...												
Hardtop, 2d....	2531																		



New Products Shopping Center

Gasket & Seal Kits

*Designed for
automatic transmissions*

Jack-Pack Manufacturing Co.:

The new Jack-Pack sealing line for automatic transmissions is introduced. It features a mini-



mum number of overhaul kits that cover all passenger and commercial automatic transmissions. According to the manufacturer, each kit is complete for listed model. Low inventory of these overhaul kits means less orders to place and no un-needed parts need be stocked company states. Write: D. L. Poe, Sec. & Treasurer, Jack-Pack Mfg. Co., 2115 N. Mariana Ave., Los Angeles 32, Calif., or 'phone CA 5-3279.

Acrylic Mixing Colors

*Adds new mixing colors
for use on 1961 cars*

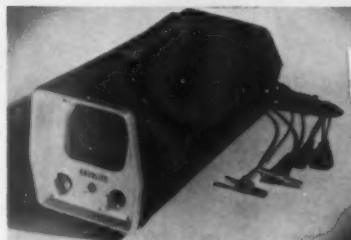
Ditzler Color Division, Pittsburgh Plate Glass Co.: Nine new mixing colors for correctly intermixing new colors to be used on 1961 cars have been added to the Duraacryl Exact Weight Mixing Set. The new acrylic mixing

bases incorporate new pigments that permit the matching of colors that could not previously be intermixed company states. Write: Ditzler Color Division, Pittsburgh Plate Glass Co., 8000 W. Chicago Ave., Detroit 4, Michigan or 'phone WE 3-7903.

Spark Plug Scope

*Provides quick reading
of spark plug performance*

The Electric Autolite Company: A spark plug scope analyzer has



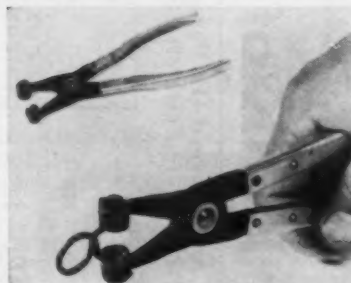
been developed. It is designed to provide quick reading of spark plug performance, company states. Worn spark plugs, deposit-fouled plugs and normal operating plugs are clearly indicated on the big screen. In addition, ignition problems involving the condenser, cap, points, spark plug wire or other ignition trouble can be diagnosed. Scope is contained in a plastic case and weighs ten pounds. It is powered from the car battery and operates on either 6 or 12 volt DC systems. Write: Glenn

Campbell, Dir. of Publicity, The Electric Autolite Co., Champlain St., Toledo 1, Ohio, or 'phone CH 3-3131.

Wire Clamp Pliers

*Removes or installs wire clamps
in any position*

AC Spark Plug Division—General Motors Corp.: A service tool, designed to take the work out of installing and removing spring wire hose clamps, is available. The all-steel wire clamp pliers have tempered jaws with deep slots to hold the clamps securely. The jaws swivel through 180 degrees for removal or installation of wire clamps in any position. There are two different size slots in the



jaws for use on all size clamps. Write: W. J. Oldfield, Dir. of Adv. & Promotion, AC Spark Plug Div., GM Corp., 1300 N. Dort Highway, Flint, Mich. or 'phone CE 4-5611

Continued on page 78

CAR and TRUCK shop kinks

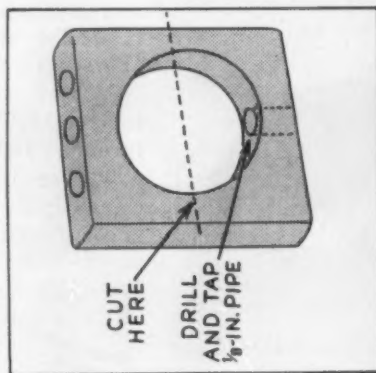
\$25 for KINK of the month \$10 paid for other KINKS

Opening Rocker Arm Plugged Oil Passages On Ford V8's

Karl P. Seckler, 1311 Faircrest Street, S. E. Canton 7, Ohio

Kink of the Month

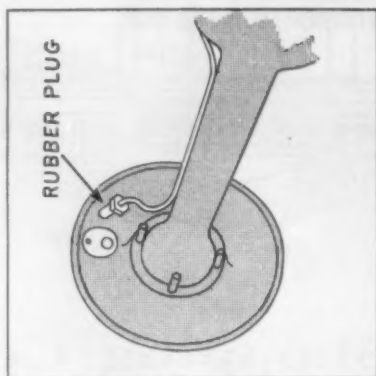
77. Use a rocker arm shaft stand and cut off above bottom of shaft contour. Drill present hole to $\frac{7}{16}$ " and tap for $\frac{1}{8}$ " pipe. In this hole screw a grease fitting. Bolt assembly to the cylinder head oil passage. This will give you 4000 to 8000 pounds pressure to force sludge out and the grease will force out in a minute with the oil.



Removing Rear Wheel Cylinder Without Bleeding System

William A. Del Sardo, 114 Hollowhaven Dr., Pittsburgh, Pa.

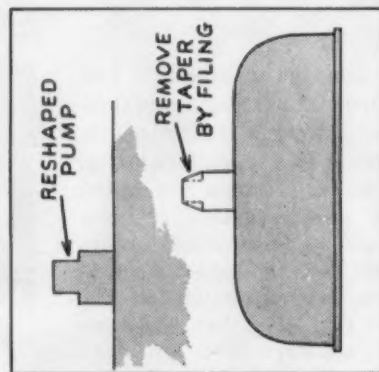
78. On Chrysler Corporation cars their master cylinders are up high. When removing a rear wheel cylinder the fluid in the reservoir will drain completely. This makes it necessary to bleed the whole system. Save the rubber plug in each new wheel cylinder. After removing the brake line, put the rubber plug on the end of the line.



Reworking Front Pump On Dynaflo Jobs

Jack Mercer, Auer & Ashley Buick Inc., 202 Main St., Lakewood, N.J.

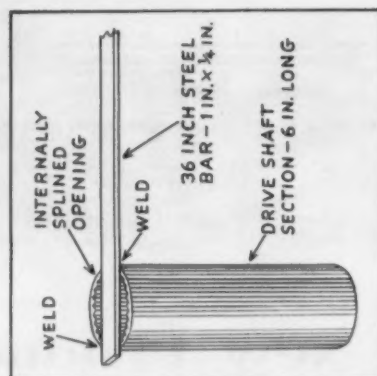
79. Front pump covers may need to be replaced due to excessive wear from the front pump driving gear gouging into the front pump plate. Usually the primary pump hub wears on a taper, where it fits into the driving gear. We save this by filing all the driving edges of the primary pump hub smooth and straight. This prevents the driving gear from riding high on the primary pump hub.



Tool For Removal of Buick Differential Pinion Gear

Chuck Shaw, Jr., 701 Whitelock Street, Baltimore, Md.

80. Here is a tool for removal of the differential pinion gear in 1956-60 Buicks. Cut off the last six inch section of a discarded Buick drive shaft at internally splined differential end. Weld a piece of steel rod $1\frac{1}{4}$ " by $36\frac{1}{2}$ " long to the cut end.



AC SELLING SLANT OF THE MONTH!

MONEY-MAKING FACTS FOR DEALERS



Wait till she feasts her eyes on this

presto

automatic griddle!



USE WITH YOUR REGULAR CONTROL MASTER — If you ordered a Presto Frying Pan in the last AC Fuel Pump merchandising program — you received a Control Master which can be used with the griddle.

Take it home to her with this AC Fuel Pump Merchandiser

Big juicy steaks, chops, hamburgers, golden pancakes, heaps of good eating—grilled right at the table with this family-size 11" x 17" Presto Griddle. Just dial Presto's Control Master to the right temperature and start grilling. Exclusive slideout drip tray for easy clean-up. Stick-proof silicone surface. The Control Master (not included in FPM-75) detaches so griddle can be washed completely under water. A wonderful family gift; a top prize for an employees' sales contest.

HERE'S ALL YOU DO: Just place a qualifying order for 6 AC Fuel Pumps of your choice; then add \$17.40 for FPM-75 containing the Presto Griddle, and two popular #4460 Fuel

Pumps for 1955-57 Chevrolets. When you sell the two fuel pumps, you recover the \$17.40 you paid for the package. The profit from the two fuel pumps (\$7.82) pays for the Presto Griddle.



FPM-75 CONTROL MASTER PACKAGE

You can order a Control Master with the FPM-75 package by including \$6.50 with your FPM-75 order. This package contains one Control Master and one #4460 Fuel Pump. Sell the fuel pump for \$8.70 and recover the cost of the package . . . Plus, a \$2.20 profit. Your Control Master costs you only \$1.71.

ORDER FROM YOUR AC SUPPLIER!



SELLING SLANTS

MONEY-BAKING FACTS

Permanent super-compact
storage carton

Super bright,
extra-hard aluminum
branches

Assembles in
minutes, easily

Long-lasting beauty,
year after year

Each branch
fully assembled

All-metal
tripod stand

OF THE MONTH !

AC

Put your customers in a merry mood this season with this

Big 6½' Aluminum Christmas Tree

Get it with the SPM-81 Promotion Package

Solve your holiday decorating problems in a jiffy with this big 6½' shimmering aluminum Christmas tree. It's the easiest way possible to fill your place of business with a note of festivity. Such atmosphere sets your service center apart from the ordinary, creates drawing power—and puts your customers in a merrier buying mood. These trees can be used any place—in the front window, office, lube bay, etc. You get one tree with each SPM-81 Promotion Package.

Ornaments included—Each tree comes with a package of "Bold Glow" featherweight styrofoam ornaments.



Add special glitter to your tree with these two
HANDY FLOODLIGHTS

Get them with the SPM-82 Promotion Package—Use this pair of weatherproof, indoor-outdoor, blue floodlights to add a new sparkle of beauty to your aluminum tree. Direct them on the tree from any angle; they're fully adjustable. Place them on the floor or attach to wall. Each unit has a 6-foot cord and is completely weatherproofed for outdoor use. Perfect for display lighting—any season. Get SPM-82 with any AC Spark Plug order. Just add \$9.95 for the two floodlights and an 8-Pac of AC Fire-Rings. The profit from the sale of the 8-Pac, plus \$1.39, pays for the floodlights.



Here's How to Get SPM-81—The SPM-81 package contains the aluminum tree, styrofoam ornaments and an 8-Pac of 85TS AC Fire-Ring Spark Plugs. You get the aluminum Christmas tree and ornaments in the SPM-81 AC Spark Plug Package for only \$1.94, and the profit from the sale of the 8 spark plugs contained in the package. Your initial investment in the entire package is \$10.50 with any order for AC Spark Plugs.

AC Fire-Rings are used on more new cars than any other brand—ACs are best for replacement, too—in all cars—thanks to their exclusive "Hot Tip" that heats faster and cools faster to stay clean longer.



FIRE-RING SPARK PLUGS

ORDER NOW FROM YOUR  SUPPLIER



SELLING SLANTS

MONEY-MAKING FACTS

★★ Ice-O-mat
ice crusher



★ Airguide
auto compass



TAKE YOUR PICK

1-2-3-4 and 5 Star Awards

This is just a sampling of the 30 valuable prizes you can choose from in the AC-Guide Parade of Prizes. Read how you can get one or more of these exciting prizes—and make extra profits besides!

★★★ Sportline
sleeping bag



★ Coleman
insulated
jug



★ Silix
Starburst
Carafe



★★★★★ Shakespeare
spinning outfit



★★★★ Electric
can opener



OF THE MONTH !

AC

FOR DEALERS

Hurry—Hurry—Hurry! It's Pick-Your-Prize Time in the

AC Guide

Parade of Prizes

Yours with the GLM-79 Merchandiser Package

What an assortment of prizes! If you're an outdoor man, you might like a deluxe sleeping bag . . . a Coleman lantern or camp stove . . . a tackle box . . . or a Shakespeare spinning outfit. Or why not thrill the lady in your life with an electric blanket . . . an electric can opener . . . or a deluxe hair dryer. There are gifts for the whole family, too—30 in all. And now you can get one or more of these wonderful gifts just by stocking and selling "Guide" Lamps—the sealed-beam lamps that are used on more new cars than any other brand.

How to get your "Parade of Prizes" Awards

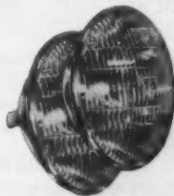
Each GLM-79 Merchandiser Package you buy contains a 1-star Award Certificate—redeemable immediately for one of several 1-star gifts. The more packages you order—the more 1-star certificates you can accumulate for more expensive 2—3—4 or 5 Star Awards, as shown here. To order your prize or prizes, just fill out the certificate and send it to AC Parade of Prizes Headquarters. You pay only \$28.35 for each GLM-79 package containing 16 fast-moving AC Guide sealed-beam lamps. The profit from three 6000 series lamps is your only investment in the valuable 1-star award certificate. You get full profit on the 13 remaining lamp units.

Get on the beam for more sales, prizes and profits

Give your lamp sales a real boost by offering your GLM-79 prize certificate as an employees' sales award.

Used as an incentive, such prizes can quickly build lamp sales and profits.

GLM-79 CONTAINS



16 FAST-MOVING AC GUIDE LAMPS

Each package contains a balanced inventory for both 2- and 4-headlamp cars. The assortment consists of the following types: 5—6006; 5—6012; 2—4001; 4—4002.

VALUABLE 1-STAR AWARD CERTIFICATE

A 1-star Award Certificate comes in each GLM-79 Package. It can be redeemed immediately for a 1-star award by completing the reverse side and mailing to AC Parade of Prizes headquarters. Award Certificates may also be accumulated for larger 2- to 5-star awards.



AWARDS FOLDER

Fully illustrated, this folder shows all of the prizes available and how many star certificates are required for each prize. There are 30 valuable prizes in all.



ORDER GLM-79 PACKAGES FROM YOUR **AC** SUPPLIER TODAY

TIPS FOR THE BODY SHOP

Using Filler To Hold Snap In Fender Molding Clips

Snap in fender molding clips have always been a problem. They tend to push back into the molding when installed. When this problem arises, apply a little fibre glass body filler inside the molding and behind the clip. When it has hardened the molding will snap into place perfectly. *Roy T. Womack, 1545 Thermo St., Fortuna, California.*

What To Do When Welding Near Or Around Moldings

When welding near or around moldings which are hard to remove, just apply a coat of carbon from your acetylene torch. When finished welding, wipe off with cloth. Another time saver is to lightly steel wool all moldings before a complete paint job. *George Brockelbank, Dunham's Auto Body, 860 Boston Road, Pinehurst, Mass.*

Tool Makes Sandpaper Last Longer & Protects Fingers

I have a tool that is simple and inexpensive. It will make sandpaper go farther and save fingertips from being made sore and tender. Also it will help in sanding a smooth place where filling is done. I took a carpenter square and cut one piece 7 inches long and another one 11 inches, the full length of a sheet of sandpaper. Then I glued a piece of rubber about $\frac{1}{4}$ inch thick, as wide as the piece of square, to one side of the metal. I also use

it for blocking out plastic, putty and surfacer. *George Kowalski, George's Auto Body Shop, Percy, Ill.*

Tool For Removing Dents Without Pulling Upholstery

This tool saves us a lot of time and it is easy to make. Just weld a sheet metal screw on end of a "tee" handle. To use the tool we drill $\frac{1}{8}$ in. holes along the dent. Screw tool in holes and tap edges along dent. We have



straightened many jobs this way. *John Orris, Whalley Ford Sales, 12th St. & Graham Ave., Windber, Pa.*

Discarded Wrapping Paper Protects Cars From Dust

Some car manufacturers wrap their replacement parts like hoods, fenders, etc., in a wrapping that is four or five sheets thick. Some of these are a good size. Take these sheets apart and use them to lay on a car to keep dust off. They also can be used for masking a car when you only want to paint lower half. *Justin D. Tieri, 628 Parkside, N.W., Grand Rapids, Michigan.*

Tool For Removing Staples Without Damaging Headliner

In most G.M. cars, the headlining is stapled across the windshield and back glass opening. To remove these staples with the least amount of damage to the headlining I use a tool made in the following manner. I take an ice pick or similar pointed tool, heat the pointed end and bend about $\frac{1}{2}$ of the pointed end to right angle of the rest of the ice pick so as to form a hook. By using this hook, the staples may be easily pulled. In replacing the headlining across these openings, apply a little trim cement to the edges. Wait until tacky. Then apply the headlining to the tacking strips around these openings. The glue will hold the lining in place while you tack it. *Walter C. Bruss, Body Shop, Mel Bloch Chevrolet, Rolla, Missouri.*

Method To Fill Molding Clip Holes On Fenders

When filling chrome clip holes on a fender or hood, I grind off the paint around them first. Then I countersink the holes with a bit larger than the holes. Holding a dolly behind hole, you can easily fill the hole with torch and acid core solder. The dolly cools the solder before it has a chance to run off. *Victor Sipla, BB 1, Grand Marsh, Wisc.*

BODY SHOP TIPS
are worth

\$7.50

If you've developed an Idea that has helped you to do body and fender work or painting better or faster, it may be worth money. Jot down the idea and, if necessary, make a rough sketch. Sometimes a snapshot will help. Just make the description of your BODY SHOP TIP clear, and if it is used, you'll receive a check for \$7.50.

**DESIGNED
TO DUPLICATE
THE ORIGINAL FINISH
OF ANY CAR!**

Heller VIXEN *Milled Curved Tooth* Files

FACTORY FINISHES COME NATURALLY when Heller VIXEN Files are used on body repair jobs... because they're the same files the leading car makers use to produce paintable surfaces without extra filing or polishing.

THERE'S NOTHING FASTER THAN A VIXEN! Exclusive undercut teeth chew off metal in time-saving bites. The forward curve, deep gullets and wide pitch prevent loading and tracking.

SEE A DEMONSTRATION! Your nearby Heller distributor has Heller Vixen Files that fit any flat or curved body surface you'll ever repair. Make a date for a presentation today.



HELLER TOOL CO.



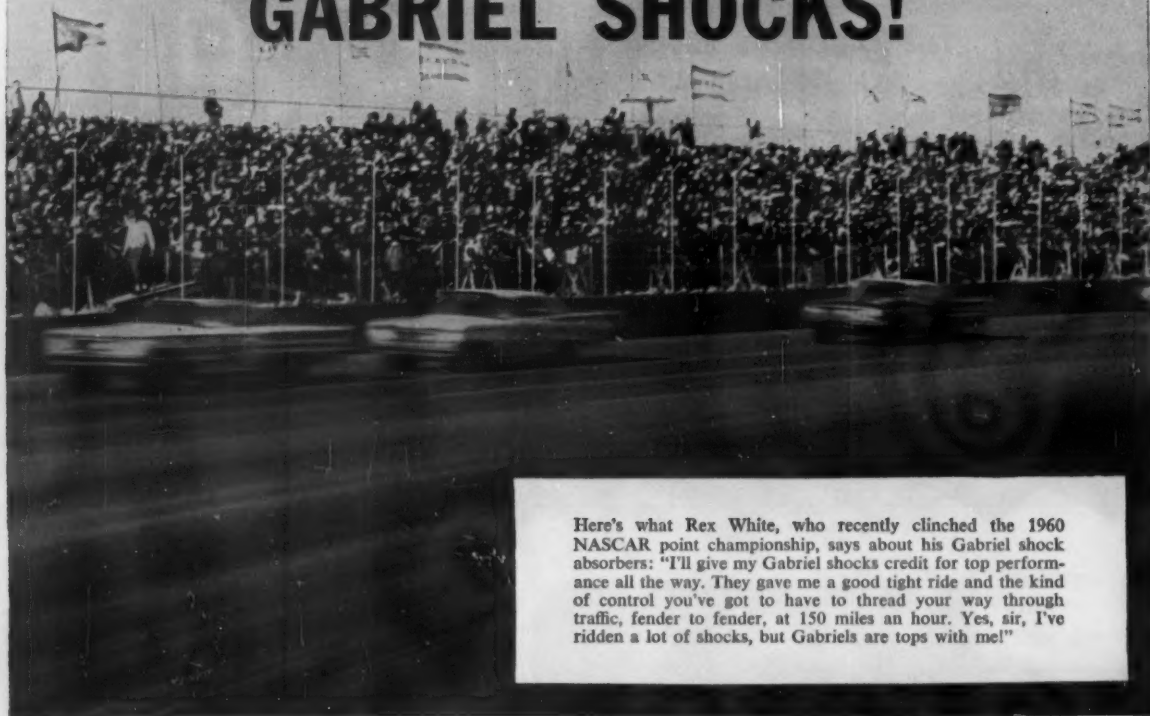
17-B 17

America's Oldest File Manufacturer
NEWCOMERTOWN, OHIO
Subsidiary of Simonds Saw and Steel Co.

Branch Offices and Warehouses: Newark, N. J. • Detroit • Chicago • Shreveport • Los Angeles • Portland, Oregon

Chilton's MOTOR AGE • November 1960

NASCAR* CHAMP ACCLAIMS GABRIEL SHOCKS!



Here's what Rex White, who recently clinched the 1960 NASCAR point championship, says about his Gabriel shock absorbers: "I'll give my Gabriel shocks credit for top performance all the way. They gave me a good tight ride and the kind of control you've got to have to thread your way through traffic, fender to fender, at 150 miles an hour. Yes, sir, I've ridden a lot of shocks, but Gabriels are tops with me!"



**REX WHITE, 1960 STOCK CAR
TITLE HOLDER, GIVES HIS
GABRIELS CREDIT FOR "TOP
PERFORMANCE ALL THE WAY!"**



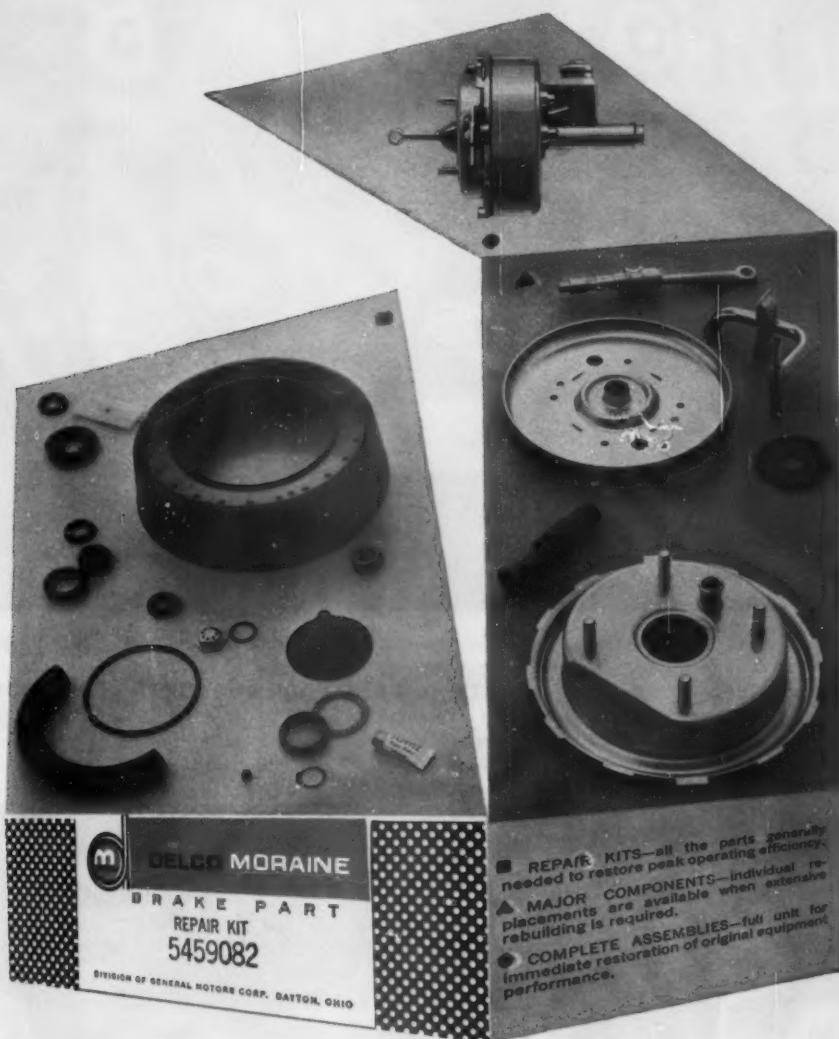
That's high praise from a high source! And remember: Rex White was not driving an Indianapolis-type car, with special racing equipment. He was driving a stock car, using standard equipment . . . the same rugged Gabriel shocks you can offer your customers. Be sure to tell those customers about Gabriel's proven superiority . . . and remind them to get ready for treacherous winter driving *now* with a Gabriel safety checkup.

*National Association for Stock Car Auto Racing

Gabriel
SHOCK ABSORBERS

THE GABRIEL COMPANY • Cleveland 15, Ohio

Bring back new-car safety, new-car performance with **DELCO MORaine POWER BRAKE SERVICE UNITS**



These kits, parts and complete assemblies—along with special service manuals—help you to make quick, accurate repairs as recommended by the original manufacturer. And your customer gets that just-like-it-was-when-I-first-bought-it feeling. Service units and copies of the Delco Moraine power brake service manuals are readily available through car dealers and U.M.S. outlets. Order now.



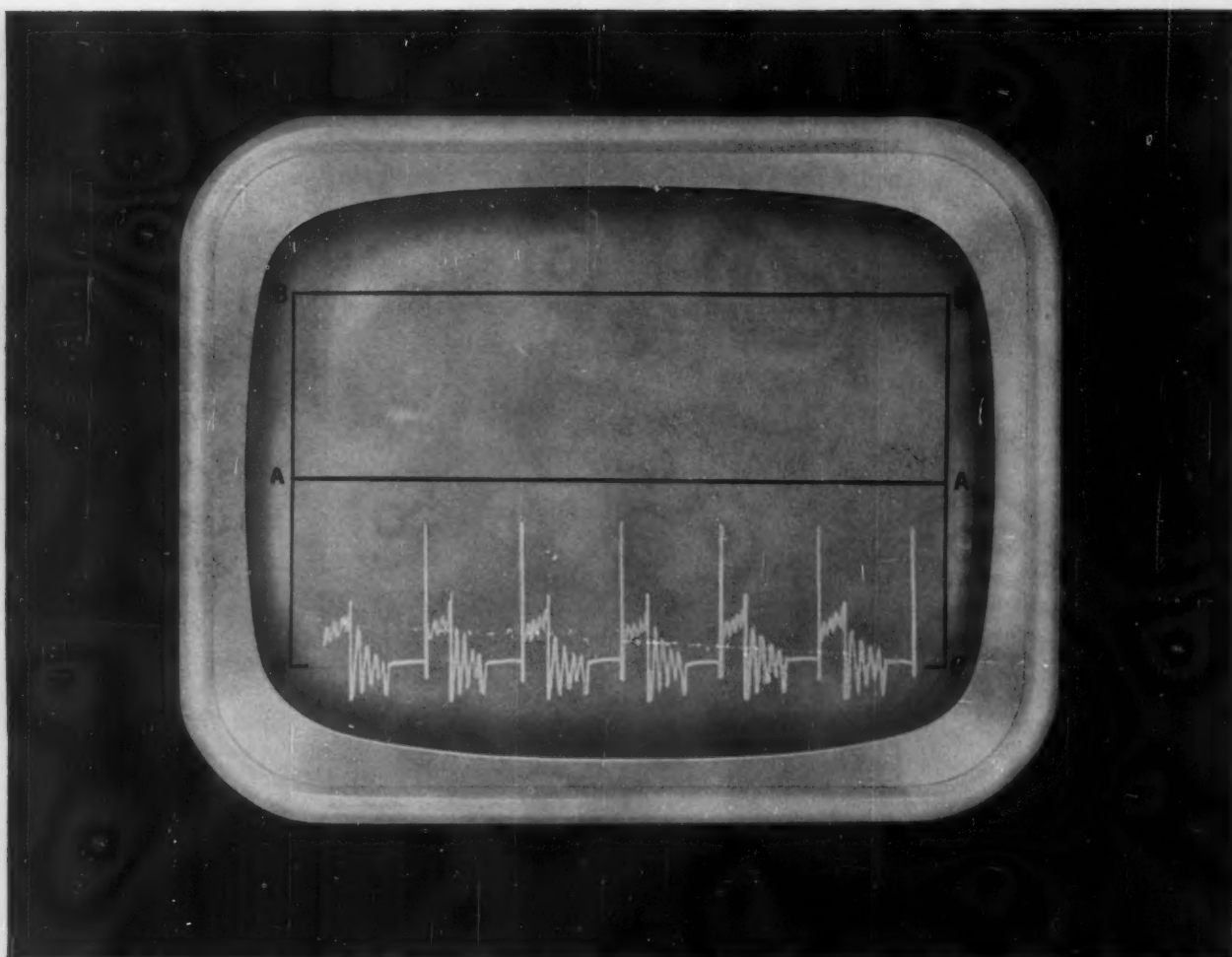
Service manuals available for all models.

DEPENDABLY MADE

DELCO MORaine



Division of General Motors, Dayton, Ohio



BIG 5" SCREEN allows viewing from a distance—shows firing events in brightest light, indoors or out.

FREES THE HANDS! No squinting, no aiming, no fooling around. No peeking required either! You can view the big screen from a distance. Place the Autolite Scope on a fender or bench and watch it while you work!

BOTH YOU AND YOUR CUSTOMERS CAN LOOK!

The screen is that big! You can discuss ignition performance and economy while a customer sees for himself where the pattern indicates a malfunction.



HERE NOW...

AUTOLITE "BIG SCREEN" SPARK PLUG SCOPE



Checks and indicates defects throughout ignition system without removing plugs!

Quick and easy to use, dependably accurate, this highly advanced Autolite Big Screen Spark Plug Scope reveals the toughest ignition problem without removing the plugs.

You can give your customer a complete ignition analysis in just seconds. You can show him the trouble right on big easy-to-see 5" screen. And during the tune-up, you can check your progress while you work, insuring top accuracy and guaranteed customer satisfaction.

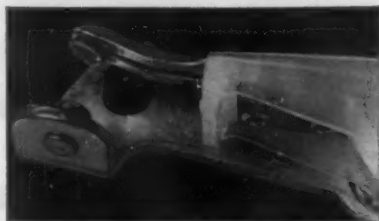
More than just another "plug scope," this revolutionary time-saver from Autolite gives you the complete story on plugs, coils, contacts, reverse polarity. In short, all ignition conditions.

For speed, accuracy, and on-the-job convenience, plus the exclusive advantage of no-squint big screen viewing, check out the new Autolite "Big Screen" Spark Plug Scope today. Call your Autolite Spark Plug Wholesaler.

THE ELECTRIC AUTOLITE COMPANY, TOLEDO 1, OHIO



REVEALS lead fouling, oil and gas fouling, electrode wear, cracked insulators—all spark plug conditions!



REVEALS defective coil and contacts, reverse polarity, all ignition conditions.

AUTOLITE SPARK PLUGS

PERFORMANCE PROVED IN COMPETITION FOR ALL CARS

Body Shop Continued from page 55

pictures make a mental note of the shop's name and location.

"Motorists always like to talk about the repair work that was done on their car. They proudly show these before-and-after pictures to their friends, neighbors, co-workers and relatives," points out Pritz. "Every time they show this folder of before-and-after pictures to these people, they are also automatically placing our name before these individuals who have a tendency to remember it. Many prospects have told us that they come to our shop be-

cause they saw the type of work that we did on photographs shown to them by our previous customers. This, more than pays for itself many times over."

Pritz points out that the first set of pictures he ever took of a wreck job with his model 80 Polaroid camera was responsible for a \$1,600 job. He took several photos of this wreck. Brought them to the office of the insurance adjuster and went over the cost of repairs to the car. With the pictures in front of the adjuster, no further check of the

car was required by the latter. Approval to handle the \$1,600 job was given immediately.

In addition to the thirty-eight year old reputation of this firm for prompt quality workmanship, business is solicited by direct mail, highway billboard signs and a telephone book listing. Of the three, Pritz points out that his direct mail is the most gainful. Resulting in a 70 percent response from the motorists to whom it is directed.

Once a motorist comes to the shop for an estimate, Pritz shows them around. They can see the modern equipment and tools that his mechanics are working with. He impresses upon them the speed with which their car can be handled. He offers them a "loaner car" if they cannot be without transportation. Coupled with the before-and-after photographs that show them the type of workmanship achieved by this shop, Pritz has been able to keep his fifteen-man shop working on a continual basis.

"We now consider our camera an essential working tool," says Pritz. "It has brought us added business. It provides us with a permanent record of estimates that we give and minimizes the possibility of customer complaints."



...but TRAMCO flexibility lets you buy exactly what you need

A la carte or "full course" . . . the flexible TRAMCO line provides visible packaging & any combination of parts you need. No waste, no shortage, no unwanted surplus. Need a precision-built individual part? A Sub-Assembly Repair Kit? A complete, conveniently packaged Rebuilding Kit? TRAMCO has them all—always.

FOR THE BEST SELECTION IN **AUTOMATIC TRANSMISSION AND POWER STEERING PARTS**, PUT YOUR TRUST IN TRAMCO.

TRAMCO INDUSTRIES, INC.

125 WEST END AVE. • NEW YORK 23, N. Y.



Imported Car Registrations* For Month of August

1960		1959	
Volkswagen	12,022	Volkswagen	9,520
Renault	5,016	Renault	9,011
Opel	2,239	Fiat	3,822
Simca	2,033	Opel	3,712
Triumph	1,961	English Ford	3,608
Fiat	1,889	Simca	3,577
English Ford	1,858	Hillman	2,717
Austin Healey	1,902	Triumph	2,326
Volvo	1,347	Vauxhall	2,247
M.G.	1,190	M.G.	1,826
All Others	11,434	All Others	14,274
Total	42,577	Total	86,450

Eight Months Total

1960		1959	
Volkswagen	101,567	Volkswagen	74,472
Renault	49,096	Renault	50,168
Opel	20,226	English Ford	29,707
English Ford	19,244	Opel	26,751
Fiat	16,018	Fiat	26,178
Triumph	12,971	Simca	25,725
Austin Healey	12,434	Hillman	20,137
Simca	11,850	Triumph	16,017
M.G.	10,057	Vauxhall	15,670
Mercedes Benz	9,633	Volvo	12,761
All Others	92,621	All Others	101,325
Total	306,827	Total	404,951

* Compiled from official state records. Data property of R. L. Polk & Co. May not be copied, sold or reprinted without Polk permission.

GET THE BUSINESS THAT'S THERE!...MORE TIRE SALES COME FROM
BETTER TIRE SERVICE

DO THE BEST TIRE GAUGING AND INFLATING JOB YOU CAN



SCHRADER CHUCK GAUGE 3650 or 3650C . . .
world's handiest . . . is the simplest, toughest,
most versatile gauge you can use. Use them
wherever you service tires. One finger control
for gauging, inflating, deflating. Replaceable
gauge unit.



#8106B—The "Master"
gauge that certifies
your airlines
and other gauges.

#71889H—All
range dual-foot
service gauge for
every need.

#7750T—
Pencil-type
gauge clips
in pocket.

SUPERIOR SCHRADER GAUGES
tell tire pressures accurately in 20 seconds,
and you can inspect tire tread condition at
the same time. Make money this easy way—
drivers are more air pressure-conscious
since tubeless tires.



**SCHRADER CAPS AND
"SWIVEL-T" CORES . . . "ACE OF
STANDARDIZATION" CONSTRUCTION**
insure your repair jobs. Cores can't
stick. Caps can't leak. Seal air in
and dirt out.

#4000V **#880V** **#7690**

Now ALL Schrader replacement tube valves are
specially prepared for **either** chemical self-vul-
canization or hot plate vulcanization. For the best
chemical curing use Schrader miracle Self-Vulcan-
izing Fluid—#338.



Tractor Valves **Passenger Car Valves** **Hand-bendable Truck Valves** **Hand-bendable Tractor Valves** **Truck and Bus Convertible Valves**

#338

Use these quality Schrader products in your service work. Get that extra business!



A. SCHRADER'S SON • BROOKLYN 38, N. Y.
Division of Scovill Manufacturing Co., Inc.

FIRST NAME IN TIRE VALVES

FOR ORIGINAL EQUIPMENT AND REPLACEMENT

Made in America to American Standards of Quality

New Products Continued from page 63

Ignition Parts

*Services Ford-built cars
from 1949 to 1960*

Holley Carburetor: A new ignition parts assortment package to service all Ford-built cars from 1949 to 1960 is announced. The HC-548 Distributor Parts Assortment is packaged in a display carton. The assortment con-

tains thirteen contact sets, twelve condensers, five rotors and three caps, of which two contact sets, one condenser and one rotor are free to the dealer. A sales catalog is also included in each kit. Write: *Director of Advertising, Holley Carburetor Co., 11955 East Nine Mile Rd., Box A, Warren, Mich.*

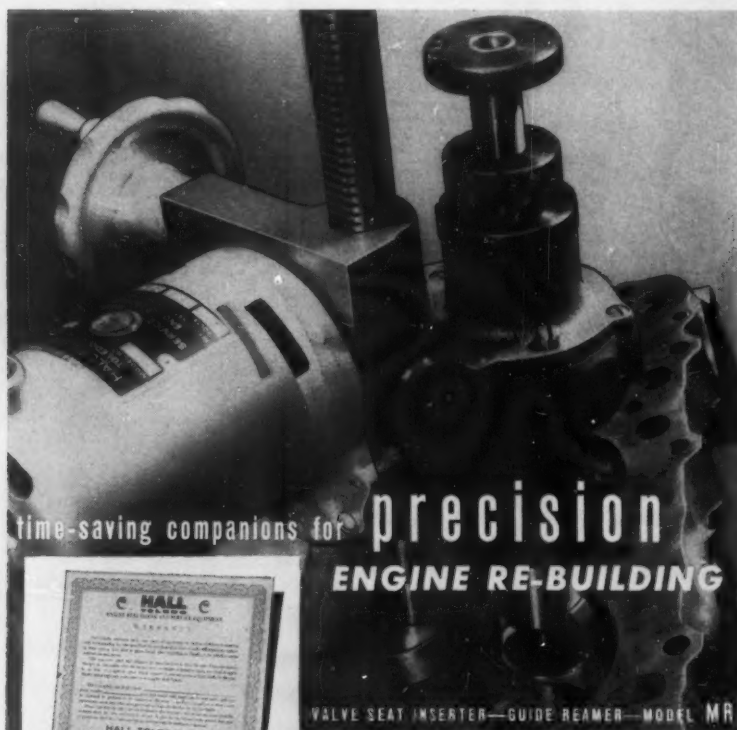
Hot Water Heater

Designed To Fit Into Small And Compact Cars

Arvin Industries, Inc.: A new space-saving hot water heater is



introduced. It is designed to conserve leg room in small and compact passenger cars. Available in both 6 and 12-volt models complete with fittings, the 803C and 804C heater is 7 inches square. It has a 12,000 BTU heat capacity. A 6 by 5½ by 2-inch copper radiator core of unique design allows air to pass through the heater with minimum restriction. Cold air is pulled through the core and hot air is pushed straight on through the heat control door at the bottom. This eliminates air-slowng back pressures, it is stated. A positive three-direction heat control permits the driver to determine the amount of heat needed, also the direction of the air flow. Write: *H. Dukes, Sales Serv. Mgr., Arvin Industries, Inc., 13th & Big Four Rd., Columbus, Ind.*



VALVE SEAT INSERTER—GUIDE REAMER—MODEL MR

One tool—the MR—does two jobs completely and saves time. It counterbores head or block for new valve seat rings, reams integral valve guides oversize. The MR also coredrills, reams for new guide bushings and removes old valve seat inserts. But the MR also uses standard Hall-Toledo expanding pilots, to make it a perfect companion to the Model EJ Eccentric Valve Seat Grinder. Ask your jobber to demonstrate this combination in action, or fill in the coupon below.

And now, the Model MR, together with all Hall-Toledo valve seat grinding equipment, carries a written, one year guarantee—your assurance of the finest in quality, precision and workmanship from the leader in the industry.

Write today for full details.

**HALL
TOLEDO**
2833 SOUTH STREET
TOLEDO 9, OHIO

Please send information on the items checked. No obligation.

☐ Valve seat grinders for Automotive, Diesel and Aircraft engines. ☐ Valve Guide Reamer and Seat Inserter. ☐ Expanding Pilots, Grinding Wheels ☐ Cylinder Hones.

Name _____
Street _____
City _____ Zone _____ State _____

Point Setting Tool

*Reduces time of setting
distributor breaker gap*



Herbrand Division of The Bingham-Herbrand Corp. A new tool that is said to reduce the time of setting distributor breaker point

Continued on page 87



"Our Yellow Pages advertising pulls 50% of our business!" says S. Bossart, Gen. Mgr., City Motor Exchange, Inc., Oklahoma City, Okla. "14 years in the motor rebuilding business have convinced me that the two best ways of pulling customers are Yellow Pages advertising and word-of-mouth recommendations. We've made a point of asking people how they come to us — so we're sure that 50% come in through the Yellow Pages! Again and again, customers say they've seen our other advertising, but when they're ready to buy, it's our Yellow Pages ads that direct them to us!"

CITY MOTOR EXCH INC.

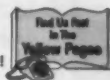
Free Inspection & Estimates
On Heavy Duty - 24 Hours To Pay
No Commercial Paper, No Cash Advance
We Repair & Rebuild Cars
Chevrolet, Oldsmobile & Pontiac
Buick, Cadillac, Lincoln, Ford, etc.
"Service and Quality" Since 1947

CE 6-1571

280 N. BROADWAY



Display ad above (shown reduced) appears under AUTOMOBILE REPAIRING. Call the Yellow Pages man at your Bell Telephone office today to help plan your program.



Display this emblem. It builds your business!

New Tools by KEN TOOL

FLANGE TYPE REAR AXLE PULLER

P-60

Attaches to any standard wheel-puller . . . to pull any flange-type rear axle on late model cars and trucks. Delivers a powerful blow to jar loose the tightest axle shaft.

**A MUST FOR
EVERY GARAGE!**

P-60A

COMBINATION SET

P-60 Adaptor attached to Ken-Tool T-500 Universal Puller. Pulls flange-type axles quicker—easier!

NEW UNIVERSAL DRAIN WRENCH

G-13

NEW 7-way wrench, for all late model cars.

The only drain-plug wrench with two 5/16" hex for newest Chrysler cars.

Quick delivery from your local jobber.

NEW BATTERY TOOLS

Sold as kit or separately.



B-26 2-in-1 post cleaner and cable spreader and cleaner. B-207 Chrome nickel Plier. B-24 New super-Grip Terminal Puller. B-25 Complete 3 tools in carrying case.

KEN-TOOL MFG. CO.
AKRON 5, OHIO

NEW LITERATURE DESCRIPTIONS

Winter Catalog

Covers anti-freeze
and testing equipment



E. Edelmänn & Co.: A new winter sale catalog of anti-freeze, battery and pressurized cooling system testers is offered. Front-page feature of the new catalog is company's No. 909 "Magic Eye" Freeze-D-Tector. This instrument tests any radiator solution. As it has only one chart to dial and one reading to take, a glance shows the freezing point of any solution. The figures are magnified by its "Magic Eye" of unbreakable Lucite. The inside spread illustrates Edelmänn Zero Testers for all solutions and single solutions. Write: E. Edelmänn & Co., 2332 W. Logan Blvd., Chicago 47, Ill.

Installer Catalog

Contains catalog pricing
schedule on exhaust system parts



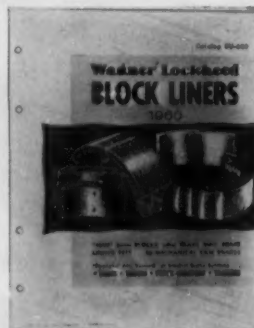
Maremont Muffler Division: 1960 Installer Catalog contains the latest catalog pricing schedule

and technical information on exhaust system parts and related accessories. Also included in the catalog is a listing of all the merchandising aids offered by the company. Write: Maremont Muffler Division, 168 No. Michigan Ave., Chicago 1, Illinois.

Brake Lining Catalog

Designed for use
in determining lining needed

The Automotive Parts and Accessories Division of Wagner Electric Corporation: Announced is the publication of a forty-eight page catalog listing brake lining blocks. The catalog



is designed for easy use in determining lining needed for commercial vehicles with straight air, vacuum, electric or other mechanical cam type brakes. With every listing of lining set numbers, the corresponding brake sizes are shown. Vehicle model reference enables users to see the basic models, any options or variations, plus all brake sizes. Write: W. W. Dannemaier, Asst. Sales Promotion Mgr. Automotive Div., Wagner Electric Corp., 6400 Plymouth Ave., Saint Louis 33, Mo.

Continued on page 88

Henry took his wife to her first cocktail party. The drinks flowed pretty freely. After a while, his wife drew him aside and whispered:

"Please don't take any more to drink, Henry. You won't believe this, but your face is beginning to blur!"

WAHOO!

**FRAM AND FRAM SUPPLIERS
REWARD DEALERS WITH GIFTS
THAT ARE ABSOLUTELY FREE!**

FRAM

**MILLION \$\$\$
GIVEAWAY**



These gifts are yours **ABSOLUTELY FREE**...personal gifts... for your home and workshop... for every member of your family!

HERE'S HOW YOU GET YOUR FREE GIFTS:

- 1** For every 24 Fram Filters you buy your Fram Supplier will give you two gift certificates **ABSOLUTELY FREE**.
- 2** Certificates may be redeemed for your choice of fabulous nationally advertised merchandise.
- 3** Gifts may be secured for two certificates, some for three, four, five, six, ten, twelve, etc.
- 4** Certificates may be redeemed at any time or accumulated and redeemed for gifts in higher value categories. (Offer expires Dec. 31st, 1960.)

Gifts are **ABSOLUTELY FREE**...they don't cost you a penny. They're your reward for selling Fram Filters. Get your gift Certificate Book from your Fram Supplier...start saving valuable Gift Certificates today.

CURRENT FRAM NATIONAL ADVERTISING MAKES FRAM FILTERS EASIER TO SELL THAN EVER BEFORE! Outstanding 4-color ads in the Saturday Evening Post ...billboards on major highways...exciting point-of-sale material!

Get your share of valuable free gifts.
**ORDER FROM YOUR
FRAM SUPPLIER
TODAY!**

FRAM
OIL • AIR • FUEL • WATER
FILTERS

YOUR FIRST LINE OF ENGINE PROTECTION

FRAM CORPORATION, Providence 16, R. I.

Alternator Service Continued from page 45

excitation of the fields. It depends entirely on battery voltage supplied to the fields thru the small brushes riding on the two collector rings of the rotor. Next look at the following:

Open Circuit in Load Relay Coil
Pitted Load Relay Contacts
Open Field Circuit
Defective Wiring Between Battery and Regulator

High Resistance at Battery Terminals
Defective Rectifier or Alternator Stator
Loose or Slipping Belt
Using Electrical Accessories With Engine Not Operating

Quick Alternator Tests

To make a quick check of the alternators electrical condition on

the vehicle; first turn on the ignition switch, but don't start the engine. Using a D.C. voltmeter connect test leads across both field terminals. The meter should indicate full battery voltage. If not, then check wire from regulator "F" terminal to alternator. Next, check from alternator to ground. With battery voltage at field terminal, check for field coil and brush condition. Disconnect field wire at alternator and strike it against TERMINAL from which it was removed. A light spark should be visible with a normal system.

Calendar of Events

Nov. 15—Connecticut Automotive Trades Assn. convention, Statler Hotel, Hartford.

Nov. 16-17—South Carolina Automotive Wholesalers Assn. convention, Wade Hampton Hotel, Columbia.

Nov. 17-20—California Automotive Wholesalers Assn. convention, Hotel El Dorado, Sacramento.

Nov. 17-19—Florida Automotive Wholesalers Assn. convention, Washington Hotel, Jacksonville.

Nov. 17-18—Seventh Annual National Forum of Automotive Air Conditioning, Sheraton Hotel, Dallas, Texas.

Nov. 18-20—Automotive Wholesalers of Illinois convention, St. Nicholas Hotel, Springfield, Ill.

Dec. 2-9—Automotive Electric Assn. annual meeting, Edgewater Beach Hotel, Chicago.

Dec. 4-5—Georgia Automotive Wholesalers Assn. annual meeting, Atlanta.

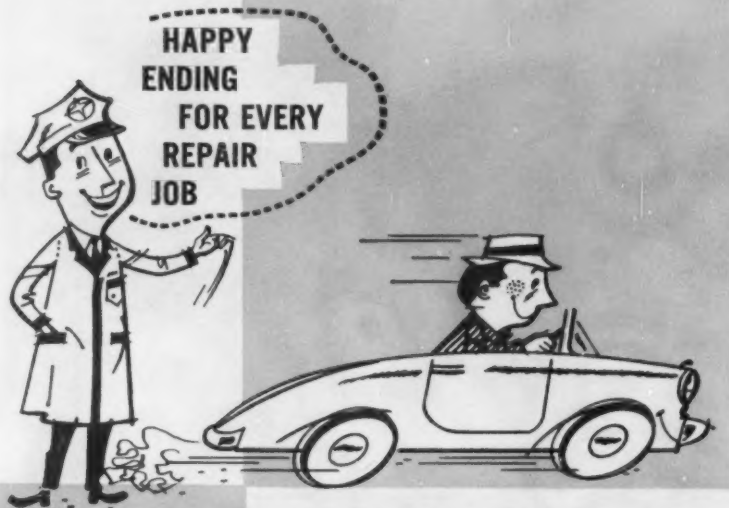
Jan. 28-Feb. 1, 1961—National Automobile Dealers Assn. annual convention, San Francisco.

Feb. 13-14, 1961—Automotive Booster Clubs, International annual meeting, Statler-Hilton Hotel, Los Angeles, Calif.

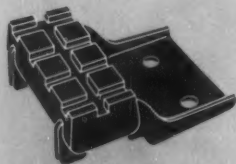
Feb. 14, 1961—General Membership Meeting, Automotive Affiliated Representatives, Biltmore Hotel, Los Angeles, Calif.

Feb. 14-15, 1961—Automotive Service Industry Assn. national convention, Biltmore Hotel, Los Angeles, Calif.

Feb. 16-19, 1961—Pacific Automotive Show presents ASI Show, Sports Arena, Los Angeles Memorial Coliseum, Los Angeles, Calif.



MOTOR MOUNT CHECK-UP



Individually Boxed. Every Motor Mount packed in Illustrated Cartons and plainly marked with full identification data.



Call your favorite jobber. He stocks a complete line of Armor-Flex Motor Mounts for all popular makes and models.

Nothing makes a motorist happier than the feeling you did a *complete* job. He wants his car working perfectly. That's why it always pays to check motor mounts on every motor repair or transmission job. It takes but a few minutes. Replace old or oil soaked mounts and send the motorist home smiling with a smoother, better performing car.



DOAN MANUFACTURING
1725 London Road • Cleveland 12, Ohio
A DIVISION OF ANCHOR INDUSTRIES, INC.

860A

Now! During Skil's "ROUND-UP DAYS"...

EXTRA TRADE-IN DOLLARS

for your old valve seat grinder or grinder set!



SKIL VALVE SEAT GRINDERS (Standard and Heavy Duty Models). Cool running, easy handling. Popular 45° angle drive for working in tight quarters. Heavy duty model takes 2" and larger stones.



SKIL VALVE SEAT GRINDING SETS. Select from four sets—two low cost basic sets or two sets that include a wide assortment of stones, pilots, etc., for either general purpose or heavy-duty work.

Right now, any valve seat grinder or grinder set—regardless of age—is worth *extra* trade-in dollars.

Here's how it works:

Buy a Skil valve seat grinder or set from your Skil Jobber. Get a whopping big *extra* trade-in price for your old seat grinder or set whatever its condition. *But hurry, this offer is limited.*

Call your Skil Jobber *right now!* Look under "Tools—Electric" in the Yellow Pages. Or write: Skil Corporation, 5033 Elston Ave., Chicago 30, Ill., Dept. 102K. In Canada: Skiltools Limited, Trenton, Ontario.



...AND SKILSAW POWER TOOLS

Tune-up, Mechanical Solutions *Continued from pg. 61*

and roller assy. tube and worm, and all bearings and shims. We adjusted this unit to factory spec. and aligned it to the frame. We then aligned front end and road tested. We could not notice any improvement. While relining brakes we repacked or re-

placed and adjusted all wheel bearings. We then installed four shocks and tightened rear spring U bolts.

*S. E. Palmer, Shop Foreman
Cut Bank Motors
Cut Bank, Montana*

I WOULD suggest installing heavier rear springs or using helper springs. Also sometimes a stiff tie rod end, or ball joint can cause this condition. Make sure these points are well lubricated and free.

Treat your friends as you would a bank account—refrain from drawing too heavily on either.

Low-Cost Shortcut to Tune-Up Profits



5 UNITS INCLUDING Metal Case \$145.00



\$16.95



\$8.30



\$29.99



\$4.65



\$32.99



\$6.35



\$5.45



\$21.95

Why Pay More...

HANSON TESTERS

Can't Be Beat!



...ALL 39 HANSON MODELS
are Top Quality,
Fully Guaranteed
and Come
Complete with
Easy-to-Follow
Instructions.

Write for Informative Literature on Basic Testing Equipment ...
YOURS FREE!

DWELL-TACH TESTER Mechanic's Price less battery	\$52.50
EXHAUST GAS TESTER Mechanic's Price less battery	46.95
IGNITION-COIL-CONDENSER TESTER. Mechanic's Price ...	57.50
AMP-VOLT-OHM TESTER Mechanic's Price less battery	41.95

Complete Motor Analyzer on mobile stand.
All four units easily removed for portable testing. **Never before so much value at this low price. \$252.95**



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HANSON

COMPANY

203 Commercial St. • Paw Paw, Mich.

FREE! FREE! FREE!

HARVEY E. HANSON CO.

Send me free literature.

Name _____

Address _____

CHY.

State



Ben Guill

Moore Announces NADA Appointment

Ben Guill, Washington legislative consultant and former member of the House of Representatives, was recently named legislative liaison representative for the National Automobile Dealers Association. Announcement of Mr. Guill's selection was made by James C. Moore, NADA Executive Vice President.

A resident of Washington since 1950, Mr. Guill is well known among governmental departments, agencies and on Capitol Hill. Since leaving his post as Vice Chairman of the Federal Maritime Board on January 1 of this year, he has acted as Washington consultant on legislative matters for several industries. Prior to his service on the Federal Maritime Board, Mr. Guill served as Executive Assistant and legislative liaison to Postmaster General Arthur E. Summerfield.

Served in 18th District

Mr. Guill served as Member of Congress from the 18th Congressional District of Texas. He is a Tennessean by birth. Aside from a period of service in the Armed Forces during World War II, he has been in the business field.

HAVE YOU TRIED

American Brakeblok's New Linings For Police Cars and Taxis?



The Interceptor lining is designed to operate efficiently at peak temperatures. Its materials are high in friction for maximum braking power. Grueling law enforcement agency road-tests prove this lining meets every braking emergency with a wide margin of safety.



The Special Service lining was developed for multi-stop service such as taxis and light city-delivery trucks. Extensive "on-the-job" testing proves Special Service lining outlasts ordinary friction materials 3 to 1 in rural mail carrier operation too.



*American
Brakeblok®*

P. O. BOX 21 • BIRMINGHAM, MICHIGAN



ORDER BOTH
FROM YOUR NAPA JOBBER.

AMERICAN BRAKEBLOK

Winter Merchandising Continued on page 49

fully. It should be quiet with no leaks. If not, carbon monoxide fumes are likely to escape into the car. The infiltration of fumes is more dangerous during the winter than at any other time. A rusty, leaking muffler or exhaust pipe can be deadly if the motorist is stalled in traffic or a blizzard.

Sell your customers on the need for winter tune-ups. This is an excellent way to increase business and

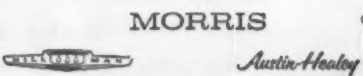

profit. Engine tuneups are essential to fast cold weather starting and help avoid stalling. The mechanic in his tuneup should check the entire ignition system. This should include points, condenser, spark plugs, automatic choke, voltage regulator and manifold heat control valve.

By now all cars should have anti-freeze coolants added to the cooling system. If not, immediately, sell your coolant and installation service

in order to prevent freeze-ups when the temperature drops. Also check for leaks in the radiator and hose. See that rusted clamps are replaced. Look the thermostat over carefully to see that it is working properly. Inspect the fan belt for wear and cracks.

You should have on hand an inventory of snow tires and tire chains. Sell your customers on the wisdom of putting on snow tires before snow arrives. Also every motorist should have a pair of reinforced tire chains for use in hazardous winter driving conditions. Chains will help prevent skidding accidents.

When customers drive in don't overlook the possibility of selling them your alignment and wheel balancing services. Out of balance wheels will shimmy. They will reduce the life of tires 25 to 50 per cent. A shimmy will also cause them to wear unevenly. If tires are excessively worn urge your customers to replace them.

Each one of these fine cars







comes Lucas equipped. For








greater profits and more







satisfied customers always







replace Lucas with Lucas.



United States Factory Branches

LUCAS

ELECTRICAL SERVICES, INC.

501-509 West 42nd Street, New York 36, N. Y.

LAMPS - DISTRIBUTORS - GENERATORS
COILS - HORNS - REGULATORS - STARTERS
WINDSHIELD WIPERS - GIRLING BRAKES
BATTERIES - GIRLING SHOCK ABSORBERS

New York • Chicago • Houston • Los Angeles • San Francisco • Jacksonville • Seattle • Boston • Denver



Check your customer's defroster, heater and windshield wipers. Be sure that they are in excellent condition. Make any necessary adjustments or replacements if they are not operating with maximum efficiency. The heater-defroster should be capable of keeping the windshield clear at all times.

Offer to check headlights, stop lights, turn signals. Both headlights should work on upper and lower beams. Be sure to have an adequate inventory of bulbs and fuses on hand when they are needed.

Continued on next page



Winter Time Merchandising

Advertise your brake relining services and adjustment services in your winterizing campaign. All customers should be urged to have their car's brakes checked. Minimize skidding by checking for equal traction on all wheels. Add brake fluid if needed. Make sure that there are no leaks and that brake linings are free of grease. They should be relined if found badly worn and in dangerous condition. Also check the emergency brake.

Urge your customers to come in for a change to winter weight oil lube job. It is also a good policy to advise your customer on how to start his car on ice or snow. Also what speeds are best under most winter driving conditions. Give tips on how to come out of a skid safely and why signalling for stops as well as turns is very important during the winter. Customers appreciate your concern for their safety.

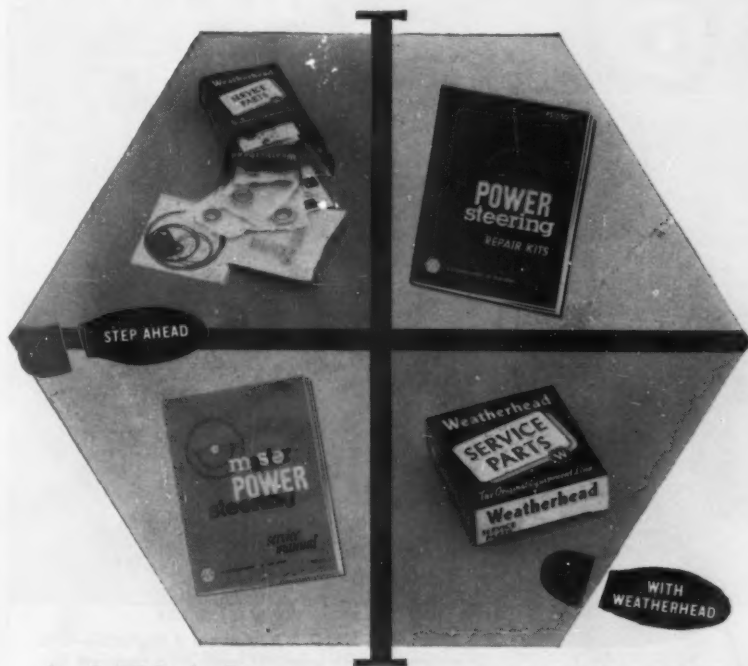
Advise your customer on the wisdom of carrying a bottle of glycerine and water in his glove compartment. It will free windshields of snow and ice quickly. Also advise them on adding fuel system antifreeze to gasoline and adding windshield washer anti-freeze. See that the glass is clear and does not have any cracks or discoloration.

New Products Continued from page 78

gaps has been announced. No. 2110 "Snap Gap" Point Setting Tool, makes time savings through the elimination of engine rotation and removal of the distributor. The Herbrand "Snap Gap" professional Mechanic's Set consists of five micro-precision split rings covering practically all American-made cars.

Also a complete range of special feeler gauges and companion adapters which establish accurate breaker point gaps. Write: William L. Faulkner, Adv. Mgr., The Herbrand Division, Bingham-Herbrand Corp., Cor. Stone and Lake Sts., Fremont, Ohio.

Continued on page 89



NEW! POWER STEERING REPAIR KITS FROM WEATHERHEAD

No more fumbling, no more searching, no more sending out for extra parts. Now Weatherhead brings you complete power steering overhaul and rebuilding kits for pumps, gear assemblies and cylinders, with individually packaged, easily identified parts in sealed transparent envelopes, and detailed instructions in every master

kit. And all parts are manufactured to original equipment specifications by original equipment suppliers.

Your Weatherhead jobber has a complete assortment of these new kits to fit all popular makes and models. He can deliver your order from stock. No excuse to lose a repair job—ever. Just tell him what you need.



WEATHERHEAD the original equipment line

THE WEATHERHEAD COMPANY • Ft. Wayne Division
Dept. 624 • 128 West Washington Blvd. • Ft. Wayne, Indiana

New Literature Continued from page 80

Illustrated Catalog

*Describes
cylindrical grinder*

Van Norman Machine Co., a division of Van Norman Industries, Inc.: A eight-page, three-color, illustrated catalog describes the company's 418 Cylindrical Grinder. Photographs and schematic drawings, offer detailed

descriptions of the grinder. The catalog illustrates the versatility of the 418 for diversified, close tolerance grinding during short runs or high production. The catalog also describes seven optional accessories for the 418. *Wm. Hyland, Western Sales Mgr., Van Norman Machine Co., 3640 Main St., Springfield 7, Mass. or Phone MU 9-3663.*



**REMOVES BEARINGS,
REPLACES BEARINGS,
EASILY! ACCURATELY!**

STOP sending your customers away. Give them the universal joint servicing they need. The Speedee U-Joint Tool makes it easy—and PROFITABLE.

SPEEDEE U-JOINT TOOL makes it profitable—and easy—to service universal joints. It's a complete tool designed just for this service. Here you have the first practical way to do the entire job, quickly, accurately . . . without a bench vise or other costly equipment. Now you avoid the risk of bent, damaged driveshafts. No more drivelines thrown out of balance. No more customer complaints. The SPEEDEE U-Joint Tool is so simple, so foolproof, almost anyone can use it with immediate success.

Ask Your Jobber for a Demonstration, or Write Direct.

**Introductory Price
only \$19⁹⁵ complete!**

A Product of

LEGVOLD ENTERPRISES, INC.
8949 Reseda Boulevard, NORTHridge, CALIFORNIA



Muffler Catalog

*Covers U.S. and Foreign Car
Exhaust Systems*

The AP Parts Corporation: Two-



hundred scale drawings of U.S. and foreign passenger car exhaust systems and a special section on the new AP oval shape Fiberglas Packed Muffler are featured in the 1960 AP Dealer Catalog. It is an 80-page catalog. Write: *H. C. Stivers, Sales Mgr., The AP Parts Corp., 1801 Spielbusch Ave., Toledo 1, Ohio.*

Comparison Charts

*Contains set of welding rod
and electrode comparison charts*

The American Welding Society: Publication of a newly revised 48 page booklet containing a set of welding rod and electrode comparison charts has been announced. The brand names of 78 companies are listed. Fifteen AWS-ASTM specifications are involved and brands as well as manufacturers names are contained in two indexes. With the aid of the comparison charts it is possible to see at a glance in which classification a filler metal belongs, irrespective of the brand name or number. Write: *Edward A. Fenton, Tech. Sec., American Welding Society, 33 Warren, Mich. or phone Jefferson 6-1900.*

Professor: "Jones, I want you to compare the death rate of the 15th century—the time of Christopher Columbus—with that of today."

Jones: "That's easy, prof. The death rate's the same—one per person."

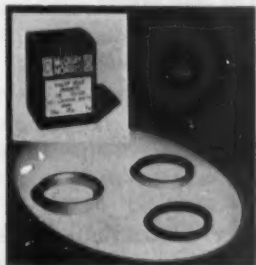
New Products

Continued from page 87

Valve Seat Insert

Comes in three different types

McQuay-Norris Manufacturing Co.: A new line of valve seat inserts has been introduced. It comprises three different types—gray iron, hardened alloy, and stainless steel. The gray iron inserts are the most widely used. Hardened alloy inserts are of higher quality and will give longer life under more difficult operating conditions. The stainless steel inserts are of premium quality. They are designed for heavy duty use, and are recommended for use where hard faced valves and chrome top



rings are needed. Write: McQuay-Norris Mfg. Co., 2300 Marconi Ave., St. Louis 10, Missouri.

Body Polisher

Designed to clean new paint finish



MoPar Parts and Accessories, Chrysler Motors Corp.: Lustur-Seal Haze Cream in a 16 ounce pressurized container is being marketed. The new MoPar Haze Cream is for use on the new

melamine enamels, acrylic lacquers, and previously-used finishes. It contains no harmful elements or abrasives, it is stated. MoPar Haze Cream is designed to chemically clean new paint finish. It will remove road grease, tree sap, and other foreign materials. Write: John T. Davis, Adv. Supervisor, Chrysler Motors Corp., MoPar Div., 7000 E. Eleven Mile Road, Center Line, Mich. or phone JE 9-3000.

Oil Filters

Designed for foreign cars

Lee Filter Corporation: The assortment, designated No. LFC-12, consists of 12 oil filters (11 different numbers) which will fit some 33 different foreign car makes and nearly all models of each dating back, in some cases, to 1941. Packed in corrugated cartons, the LFC-12 assortment

Continued on page 90



Burn-free with
Lev-R-Vent
Safety
Pressure
Cap

\$8 to \$12 coolant makes testing a must

Pressure testing the cap and the cooling system with a *Stant Universal Tester* is more important than ever. *Be sure.* Pressure test every vehicle for leaks! Guarantee your customers a worry-free year of cooling system performance with or without the new anti-freeze. If he needs a new pressure cap, show him the new *Stant Lev-R-Vent Safety Pressure Cap*. And be sure to have your jobber salesman check your cap stock the next call.

One Source



STANT MANUFACTURING CO., INC.
Connersville, Indiana

Standard of the industry and
original equipment for a generation



New Products Continued from page 89

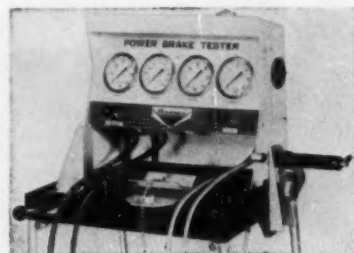
comes complete with price and specification sheets. Write: *Leo W. Weiss, President, Lee Filter Corporation, Edison, N.J. or phone Liberty 9-2700.*

Power Brake Tester

Measures hydraulic pressure and vacuum of power brake units
Wagner Electric Corp.: An-

nounced is the introduction of the Wagner Lockheed Power Brake Tester. The instrument measures hydraulic pressure and vacuum of power brake units. It is marketed with adapter parts for testing various makes of units. The power brake tester may be used as bench equipment or used to test brake units on the vehicle. A mobile cart, avail-

able as an accessory, facilitates using the tester on the vehicle. A vacuum pump is available for

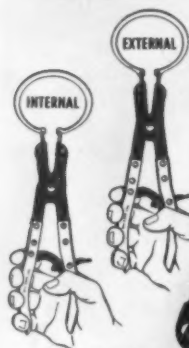


NEW K-D TOOLS

SNAP RING PLIERS

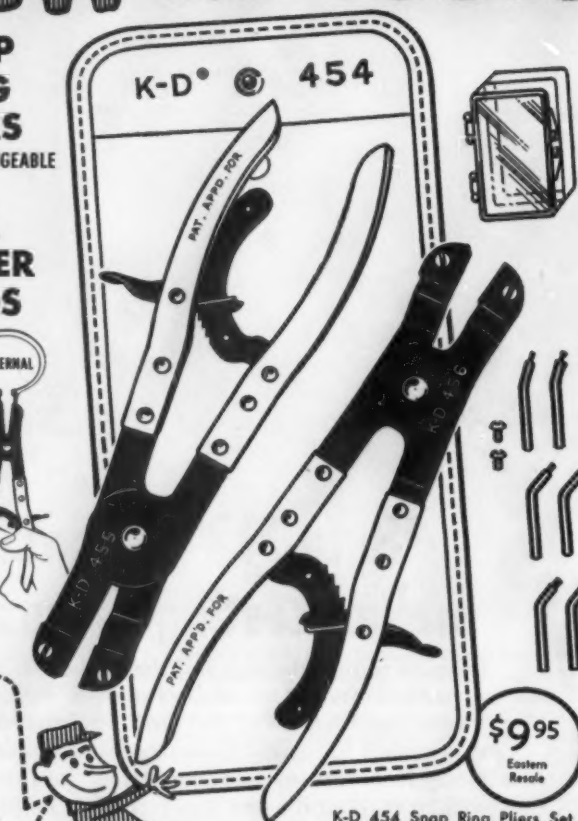
PLUS INTERCHANGEABLE POINTS

FOR LARGER RINGS



SNAP RINGS?

K-D 985 Emergency Package has 52 important sizes. See your Jobber.



\$9.95

Eastern Resale

K-D 454 Snap Ring Pliers Set. Consists of: No 455T INTERNAL Pliers for rings 2 1/4" to 4 1/2" housing diam; No 456T EXTERNAL Pliers for rings 1 1/2" to 4 1/2" shaft diam; No 457 Point Asst. (3 prs. in plastic box). Plastic kit.

OTHER NEW TOOLS JUST ANNOUNCED! Flexible Shaft Hose Clamp Tool....reversible socket Molding Nut Tool..Brake Shoe Retaining Spring Tool for Falcon Comet, Valiant, etc. ALL SHOWN IN FREE CATALOG No. 27F. WRITE FOR YOUR COPY TODAY.

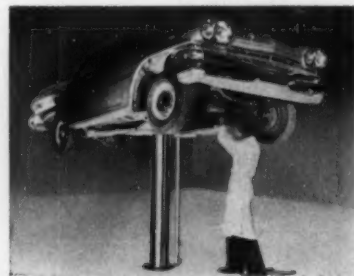
K-D TOOLS • LANCASTER, PA. • U.S.A.

use when the vehicle's vacuum is not used in testing power brake units. Write: *W. W. Dannemaier, Asst. Sales Promotion Mgr., Automotive Div., Wagner Electric Co., 6400 Plymouth Ave., St. Louis 33, Missouri.*

Swivel Air Hoist

Offers maximum undercar clearance

Globe Hoist Company: Only "fist high" from the ground the swivel arm superstructure of company's design refined "Frame-Kontakt" Hoist is said to offer maximum undercar clearance. Also easier adjustment to handle all cars. Other features include swiveling chassis contact pads adjustable to three height positions, extra

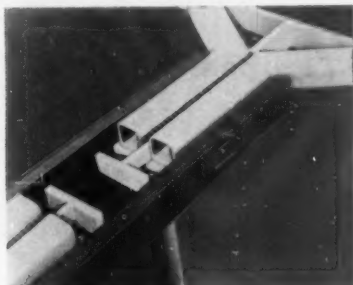


long sleeve supports for the pads, reversible pad position, brass swivel arm bearings and greater under-car accessibility accomplished by a narrow bolster and wider spacing of swivel arms. Write: *Globe Hoist Co., E. Mermaid Lane at Queen St., Phila., 18, Pa.*

Lift Adapters

Designed to bring up-to-date twin post lifts

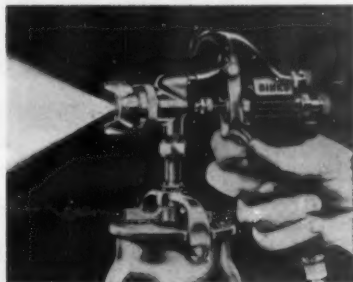
Weaver Manufacturing Co.: New adapters to fit into the rear



saddles of Weaver Twin Post Lifts equipped with Adjustable Rear Adapters are available. They make possible lifting of any car—old or new—with a conventional rear suspension system, or an unusual one, company states. The Universal Rear Wheel Adapters were specifically designed to bring up to date even the oldest Weaver Twin Post Lifts and to prevent obsolescence of equipment resulting from changing automotive design. The adapters permit raising by the rear wheels, while the front end is raised by the usual Weaver Twin Post Method—at the outer ends of the front lower control arms—for completely relaxed front suspension. *Write: Weaver Mfg. Co., Div. of Dura Corp., 2171 S. 9th St., Springfield, Illinois or 'phone CE 6-9520.*

Air Nozzles

For spraying polychromatic lacquer and acrylic enamel



Binks Manufacturing Company: To meet the special conditions inherent in the spray application

of polychromatic lacquer and acrylic enamel, the company has developed a special set of low-pressure air nozzles. Reducing the air pressure aids in preventing mottling, but sacrifices good atomization. To retain both, the quality of the finish and efficiency of atomization, the new nozzles have been designed to operate at high efficiency at pressures as low as 40 pounds. Four nozzle types are offered: the 36

SE for Binks Model 7 spray guns, the 66 SG for Model 18, 19 and 29 guns, and the 63 PH and 63 PH-1 for Model 18, 19, 29 and 21 guns. *Write: Binks Mfg. Co., 3114 Carroll Ave., Chicago 12, Ill.*

Rust Remover

Kills surface rust

Martin-Senour Co.: A product has been introduced that is said
Continued on page 94



Add an extra \$8,000, \$12,000, \$15,000 a Year SERVICING RADIATORS!

Now, the world's largest radiator servicing equipment manufacturer offers the complete package: Equipment, merchandising, "Pays-for-Itself" payment plan, complete factory school (free training for you or your man).

And Radiator Servicing produces top profits, quickly!

"\$900 Monthly Average", first 4 months—M. J. Wilson Co., Shelbyville, Ill.

"\$13,500 First Year",—Automotive Service Co., New Castle, Ind.

"\$800 Monthly Average", first 7 months—Walterboro Auto Parts, Waterboro, S. C.

FREE! Mail coupon today for Inland's New "Blueprint for Profits", a 32-page booklet showing various shop combinations. Tells exactly what you'll need to set up a complete radiator servicing dept. Gives prices, outlines "Pays-for-Itself" plan, describes experiences of others.

INLAND MFG. CO., Dept. MA-11, 1108 Jackson St., Omaha 2, Nebr.

Mail Coupon Now!

INLAND MFG. CO., Dept. MA-11, 1108 Jackson St., Omaha 2, Nebr.

Please send new free book, "Blueprint For Profits."

FIRM _____ (PLEASE PRINT)

ADDRESS _____

CITY _____ ZONE _____ STATE _____

BY _____ TITLE _____

If dealer, make of car sold _____

Are you now operating a radiator dept.? ☐ Yes ☐ No



**Corvair
by
Chevrolet**

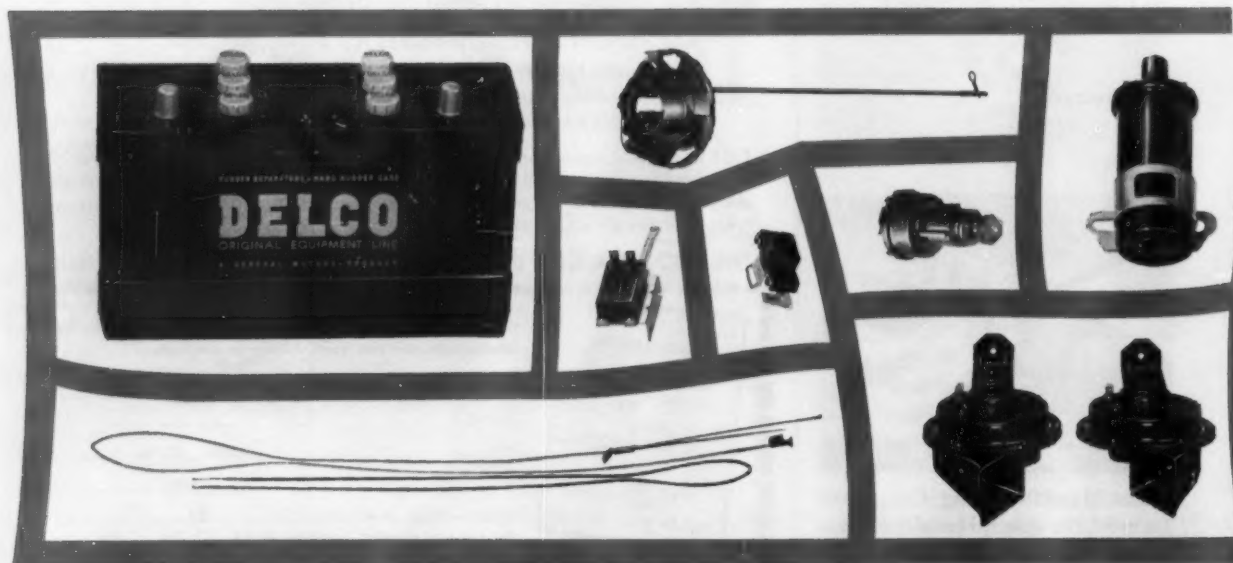


**Tempest
by
Pontiac**



...electrical systems

Delco-Remy systems provide electrical energy for the needs of motion in General Motors new size cars, too. Special electrical systems were developed by Delco-Remy working closely with Chevrolet, Pontiac, Buick and Oldsmobile. In all four new cars, these lighter units deliver the same kind of reliable high performance that has been built into Delco-Remy electrical systems for over fifty years.



**Special
by
Buick**



**F-85
by
Oldsmobile**



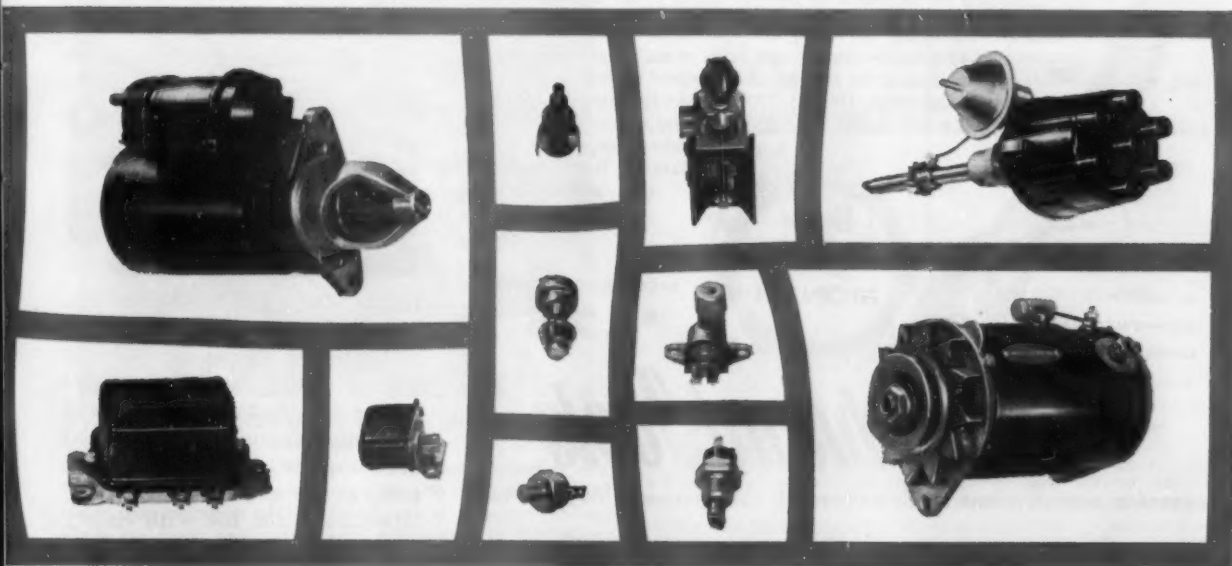
by Delco-Remy

Delco-Remy equipment for the Corvair, Tempest, Special and F-85 includes • Generators • Regulators • Cranking Motors • Distributors • Ignition Coils • Horns • Flexible Cable Controls • Directional Signal and Control Switches • and Delco Batteries.

Delco-Remy electrical systems

From the highway to the stars

DIVISION OF GENERAL MOTORS, ANDERSON, INDIANA



New Products Continued from page 91

to stop rust. It etches both steel and aluminum in preparation for painting. Twin Etch, it is stated, kills surface rust on contact. It penetrates deep into pits and pores to destroy hard-to-get rust. The "brush-on, flush-off" method of applying Twin Etch adds to ease of use and eliminates the need for re-doing paint jobs.

Write: Martin-Senour Co., 2500 S. Senour Ave., Chicago, Ill.

Dwell-Tach Tester

Can be read without preliminary setting

Kal-Equipment Company: A combination Dwell-Tach Tester is being marketed. The hand-

held instrument is unique, it is stated, in that both the dwell meter and tachometer scales are

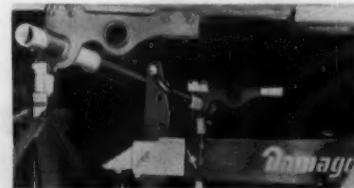


read directly without preliminary setting or calibration. One lead is connected to side of the distributor, one lead to ground. A switch is set for the number of cylinders. Then the thumb switch is pressed forward for reading of point dwell. When released, the switch automatically returns to the tachometer position for a direct reading of r.p.m. Write: Kal-Equipment Co., 411 Washington St., Otsego, Mich.

Anchor Clamps

Permits pulling from the point of impact without damaging car

Blackhawk Automotive Division: Secure anchoring of the Damage-Dozer Body and Frame Straightener to underbody "pinch welds" of unitized cars is said to be assured with new EK-30 anchor clamps. Offered in



right and left-hand models, model No. EK-229 and EK-230 respectively, the clamps permit pulling from the point of impact (down or out, to front or back) without damaging the car at anchor point. Besides using for pulling, the anchor clamps have offset holes for use with Safety

Continued on page 96

1/4" HEX FOR COMPACTS



HERBRAND 270

the only
MASTER BRAKE BLEEDER WRENCH
that covers all 3

TRUCKS CONVENTIONALS COMPACTS

A must tool for every service station and garage. It's actually two tools in one, with a 1/4" hex socket opening to cover compact car bleeder valves, plus a 3/8" hex for conventional cars and trucks.

Aside from covering "all three," this special Herbrand tool also has another advantage—special vent holes in each socket end, which permits bleeding the line without removal of the wrench from the bleeder valve. The No. 270 will take real punishment, too. It is hot forged of tough alloy steel and each socket end is broached within exceptionally close tolerances. Bright finish all over, applied to last. Ask your jobber.

3/8" HEX FOR CONVENTIONAL CARS AND TRUCKS

Herbrand
TOOL
of the
MONTH

MECHANIC'S NET
\$1.75

Herbrand Tools

HERBRAND DIVISION • THE BINGHAM-HERBRAND CORPORATION • FREMONT, OHIO

THE CHILTON MANUALS PAGE



By Paul A. Murphy

Editor of Chilton's
Flat Rate and
Auto Repair Manuals

Ignition Timing Revision

The recommended setting for ignition timing on the 1960 Ford car, 6 cylinder and 292 V8 engines with automatic transmissions, has been revised from 6° before top dead center to 10° before top dead center. This new 10° setting will generally provide satisfactory engine performance with the fuels available in most areas.

If the engine should not perform satisfactorily at this setting, the timing can be retarded within the allowable range of 2° before top dead center to 10° before top dead center. Caution: This revised timing applies to cars equipped with automatic transmissions only.

Reaming Valve Guides

Some mechanics are under the opinion that by increasing the guide diameter the valve will float more and thus produce a possible cure for valve sticking.

What they fail to realize is that when a valve is allowed to float in the guide, the guide loses control of the valve stem to a point where the valve will strike the seat unevenly.



WATCH THE FORDS go by was the obvious comment in Flora, Ill., recently when the 1961 Ford cars and trucks were introduced. Ford Motor Co. officials loaned a new Ford to every family in the town for one week who had at least one member of the family as a licensed driver. Flora residents responded with enthusiasm in this mammoth "test drive". Scene above is center-city Flora.

Go Weaver all the way!

**SERVICE MORE CARS PER DAY—
GET MAXIMUM EQUIPMENT LIFE**

A Weaver-equipped shop is a *profitable* shop! Every item in the *Complete Line* of Weaver Service Shop Equipment is designed to make your job easier, and your mechanics more productive. You are sure of dependability, long service life, maximum anti-obsolescence. And, Weaver service-trained representatives show you how to get the *most* from your equipment.



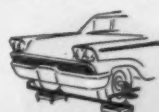
TWIN POST LIFTS



SINGLE POST LIFTS



UNIT LIFTS



WHEEL ALIGNMENT
EQUIPMENT



WHEEL BALANCING
EQUIPMENT



FLOOR, HAND
& SPECIAL JACKS



HYDRAULIC & AIR
BUMPER JACKS



WHEEL DOLLIES



HEADLIGHT TESTERS



SAFETY LANE®



CAR WASHERS



AIR COMPRESSORS

Ask your jobber for details.

WEAVER MANUFACTURING DIVISION • DURA CORPORATION
Springfield, Ill., U.S.A.

A COMPLETE LINE—AND NO ONE BUILDS IT BETTER THAN WEAVER



**SERVICE SHOP
EQUIPMENT**

OVER 50 YEARS SERVING THE
AUTOMOTIVE SERVICE INDUSTRY

Complete Weaver line includes: Twin Post Lifts • Triple Post Lifts • Frame Type, Roll-On and Free-Wheel Single Post Lifts • Unit Lifts • Bumper Jacks • Car Washers • Wheel Alignment Equipment • Headlight Testers • Brake Testers • Wheel Balancing Equipment • Jacks • Wheel Dollies • and Air Compressors ("Registered Trademarks")

New Products Continued from page 94

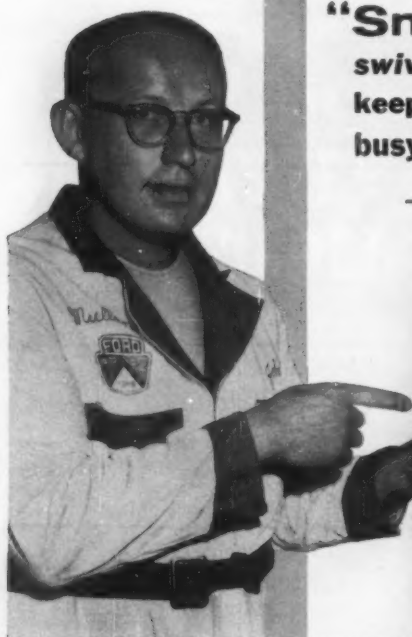
Stands and support tube. With this setup shafts and radius bars are cleared while the car is kept level at all times. The clamps, which can be used singly or in pairs are attached by tightening four cap screws. Write: Robert D. Barnard, Adv. Dept., Blackhawk Automotive Division, Dept. 51G, 5325 W. Rogers St., Milwaukee, Wis.

Spray De-Icer

Melts frost and ice on car windshields

Union Carbide Consumer Products Company: A new automotive chemical packaged in a 16-ounce size spray can melts frost and ice on car windshields, lights, locks and windows, company claims. It prevents inside

glass fogging and keeps ice from forming for hours. It also provides wheel traction under cer-



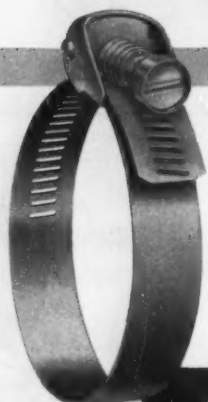
* Winner 1959 Nat'l Ford Dealers Assn. Service-Parts Sales Award

**"Snaplock's
swivel action helps us
keep pace with our
busy service schedule"**

—says John Dapper,
service manager
of Mullane Ford,*
Bergenfield, N. J.

SNAPLOCK HOSE CLAMP'S
UNIQUE "SWIVEL ACTION"
SCREW MAKES APPLICATION
EASY, FAST AND POSITIVE!

CAN'T SHAKE LOOSE... THE
GREATER THE PRESSURE, THE
TIGHTER THE GRIP!



Ask your
jobber now
for Snaplock
hose clamps.



BROOKLYN 7, NEW YORK

"We're always busy at MULLANE FORD and top quality parts that install easily and fast protect our profitable service business. When we're loaded with seasonal radiator and heater hose jobs we like to make installations with Snaplock clamps. . . . They're a cinch to put on -- save us valuable time -- and guarantee a leakproof grip."

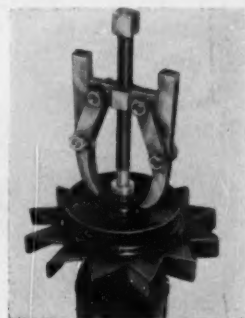
The pacesetter in hose clamps since 1913

tain icing conditions, it was stated. The "Prestone" Spray De-Icer AS-241 has a propellant system that shoots a spray of De-Icer at temperatures ranging down below 0°F. It is harmless to car finishes, company claims. Write: D. C. Parker, Union Carbide Consumer Products Co., Div. of Union Carbide Corp., 30 E. 42nd St., New York 17, N.Y., or phone Murray Hill 7-8000.

Two-Jaw Puller

*Removes Generator Pulley
Without Damage*

Owatonna Tool Co.: The use of a small, 2-jaw Grip-O-Matic puller to remove Autolite generator pulleys (press fit) without damage to parts is announced. The puller, No. 1000½-L, weighs 14 oz. It has approximately ¾-



ton capacity. OTC shaft protector No. 625-6 with tip filed off is used with the puller when removing Autolite generator pulleys. C. Kyle Peterson, Adv. Mgr. Owatonna Tool Co., 321 N. Cedar St., Owatonna, Minn.

the quality of



BRAKE PARTS
shows up at
every stop!

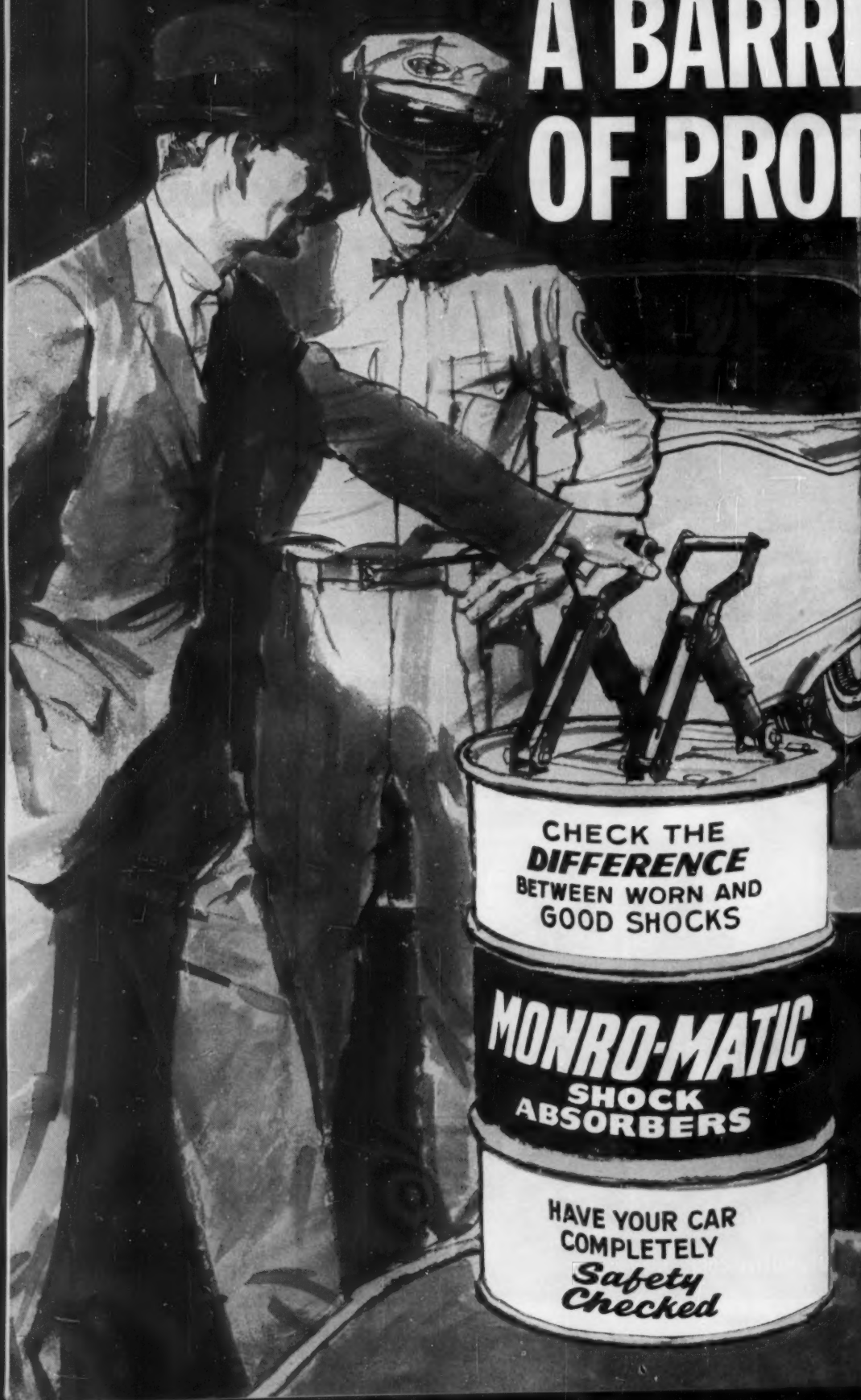


Preference for EIS — The Brake Parts Line — is based on proved advantages. EIS Brake Parts build your reputation for top-quality replacements! EIS Brake Parts are built to rigid specifications, thoroughly inspected, packaged in easy-to-read cartons and described in quick-reference catalogs! Add the EIS reputation for fast delivery from any one of 36 strategically located warehouses and, sure as stopping, the profits in EIS Brake Parts have got to show up in every sale—in every job!



Ask your EIS Distributor
EIS AUTOMOTIVE CORP., Middletown, Conn.

A BARREL OF PROFIT!



Calibrated
Ride Control
With Any Load

CHECK THE
DIFFERENCE
BETWEEN WORN AND
GOOD SHOCKS

MONRO-MATIC
SHOCK
ABSORBERS

HAVE YOUR CAR
COMPLETELY
Safety
Checked

Buy Monro-Matics by the barrel— get this NEW Demonstrator FREE

Now, a great new idea to help you sell shock absorbers like you've never sold them before! Packed in a steel barrel that doubles as a hard-working display are 14 of the most popular Monro-Matic shocks and 4 Monroe Super Load-Levelers. Fastened to the underside of the barrel lid is a shock absorber demonstrator. Flip the lid, weight the barrel with sand or water, and the demonstrator is ready to clinch many a sale for you!

Add this new merchandising idea to the far-reaching Monroe promotional drive, and you can't miss. Monro-Matics get a tremendous push, month-after-month, in LIFE, THE SATURDAY EVENING POST, POPULAR MECHANICS and SPORTS ILLUSTRATED. Every morning Monday through Friday, millions of car owners hear the WESTBROOK VAN VOORHIS "Monroe News" program and every morning and late afternoon millions more listen to BILL STERN on the "Monroe Sportsreel." Both of these popular broadcasters sell Monro-Matics on more than 325 stations of the Mutual Network. All this, plus a mountain of promotional material—ready to help you tie in directly with the hard-hitting national campaign!

DON'T MISS OUT ON THIS ONE! See your Monroe jobber now.

BD-18 Assortment { 14 Monro-Matic Shock Absorbers
4 Super Load-Levelers

Your selling price \$228.20

Cost \$140.90

YOUR PROFIT \$87.30

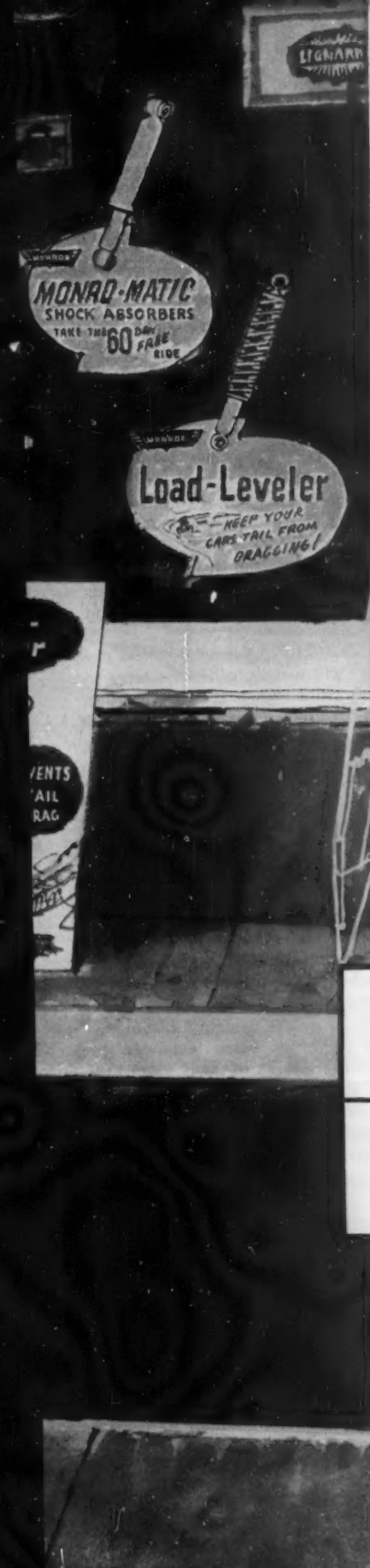
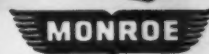
FREE

\$10 Shock Demonstrator
\$ 5 Painted Barrel Test Stand
2 Shock Absorber Window Banners
2 Load-Leveler Window Banners
10 ft. Plastic Outdoor Banner
100 Hand-out Leaflets

MONROE AUTO EQUIPMENT COMPANY, Monroe, Michigan
In Canada, Monroe-Acme Ltd., Toronto, Ontario
In Mexico, Mex-Par, Box 28154, Mexico City
WORLD'S LARGEST MAKER OF RIDE CONTROL PRODUCTS

MONROE-MATIC®

SHOCK ABSORBERS



years the only means of locating leaks. It can be used for locating all leaks down to about 8 or 10 ounces per year. When searching for leaks, the probe may be moved about $\frac{1}{4}$ " per second.

The *electronic leak detector*, a relative newcomer to the auto service shop, can be used to locate leaks down to $\frac{1}{2}$ ounce per year. Its probe may be moved up to 2" per second when searching for leaks.

The *halide torch* consists of a burner on top of a small tank of gas or alcohol. Some of the air for

combustion is drawn into the flame (chimney fashion) through a tube connected near the bottom of the flame. A flexible extension of this tube is used as a probe to locate leaks. When the open end of this tube passes near a leak, refrigerant gas will be drawn into the flame. If the leak is large enough, the flame will change color. This indicates that a leak has been located.

The *electronic leak detector*, when plugged into a lighting circuit (120 V, 50/60 cycles) is ready to operate one minute after being turned on.

The one dial on the control unit is an ON-OFF switch, it also regulates sensitivity when turned.

A light in the probe flashes for about one second when the tip of the probe passes near a leak. Thus the leak can be easily and quickly pinpointed. The minimum leak to be detected can be pre-set by checking the detector against a reference each time it is used.

When searching for leaks, the user should adjust the reference leak to equal the minimum size leak to be detected. Then adjust the leak probe light will give one very short flash each time the probe "sniffs" the reference.

With the tip of the probe lightly touching the surface, move the probe along seams and around joints at a speed of 1 or 2 inches per second. When the probe tip passes a leak about the same as (or greater than) the reference, the probe light will flash.

Large leaks of several ounces per year will usually cause the lamp to flash twice. When the light flashes, lift the probe about 15 inches. If the lamp flashes only when the same spot is touched with the probe tip, the leak has been "pinpointed." If the probe light flashes when other nearby spots are touched, reduce sensitivity until a flash occurs only for one spot. A large leak can thus be pinpointed.

A $\frac{1}{8}$ " diameter extension tube for the probe permits reaching restricted areas that cannot be reached with the larger plastic probe.

Halogen leak detection techniques are currently being extended by auto servicemen to many other useful applications in the shop. An example would be leaking tires. Leaks that cause tires to go soft in a week or two sometimes cannot be located by using the water immersion test.

To locate such leaks, increase the normal tire pressure about 4 pounds per square inch. Do this by adding R-12 from a commercially-available pressurized container. With leak detector sensitivity set at $\frac{1}{2}$ oz. per year, the offending leak can be located.

To locate leaks in radiators, drain all water and seal all openings. Then pressurize radiator to about 5 pounds gage by adding R-12

Continued on page 102

**you'll
be the
busy one
in '61
if you**



**STOCK TUNGSTEN
SELL TUNGSTEN
INSTALL TUNGSTEN**

4 COMPLETE AND
PROFIT-PACKED
IGNITION LINES!

INDIVIDUALLY
PACKAGED PARTS

TUNE-UP KITS FOR
DOMESTIC CARS

TUNE-UP KITS FOR
IMPORTED CARS

TUNE-UP KITS FOR
SMALL ENGINES



Write for Catalog **TUNGSTEN CONTACT MFG. CO.** North Bergen, N. J.

Double-
barreled
truck
profit
opportunity
for dealers:

2 TOTALLY DIFFERENT TYPES OF CHEVY TRUCKS FOR '61!



REAR-ENGINE CORVAIR 95's—Here's the newest thing in moving loads since the horse went out of style! Three Corvair 95 models—two pickups and a panel—have joined Chevy's '61 fleet, each one with more load space than a conventional half-tonner. Yet they measure more than two feet shorter from bumper to bumper! Corvair 95's feature an air-cooled engine in the rear; 4-wheel independent suspension; integral body-frame construction; nearly fifty-fifty weight distribution front and rear, loaded or unloaded; enough capacity to handle up to 1,900 pounds of payload on a nimble 95-inch wheelbase!



TORSION-SPRING '61 CHEVROLETS—They're the latest editions of the trucks that revolutionized trucking with their load-saving, road-paving independent front suspension. Torsion-spring trucks proved worth more because they work more! With these two totally different types of trucks for '61, Chevrolet dealers have more models to offer, more ways to profit than ever before! . . . Chevrolet Division of General Motors, Detroit 2, Mich.

THE GREATEST SHOW ON WORTH!



through the drain valve. This will result in absolute pressure of about 20 psia.

With leak detector sensitivity at $\frac{1}{2}$ ounce, all leaks down to two oz./year (equivalent R-12 leak) can be located.

To determine if water is seeping into the engine cylinder from the water jacket, pour about one cup of trichlorethylene into the radiator. (Some high test gasolines contain a halogen. Before adding trichlorethylene to radiator, allow leak detector to sniff exhaust while engine is idling. If leak detector gives no signal, proceed.)

Start the engine, speed it up once, and then allow it to idle. Adjust the leak detector to respond to a leak of $\frac{1}{2}$ ounce per year. Let the engine

idle. If the light in the probe flashes each time the probe is brought into the exhaust stream (at a point about six inches from the end of the tail pipe) indication is that the head gasket is leaking between water jacket and cylinder. Stop engine. Remove spark plugs one at a time. "Sniff" with the detector probe. The probe light will indicate the cylinder into which water is leaking. Determining which cylinder eliminates need for removing both heads of a V-8.

Exhaust System Leaks

Exhaust-system leaks are sometimes difficult to locate (exhaust manifold seals, joints in exhaust pipe and to muffler, leaking spark plugs, etc.). The following procedure is helpful:

Pour an ounce of trichlorethylene into the oil of the air filter. Allow the engine to idle with fan belt removed to eliminate wind. Adjust sensitivity of the leak detector so that when allowed to sniff the heat riser shaft end, the leak detector gives a short flash.

Then probe around the manifold and all joints that might leak. Leaks equal to or greater than at the heat-riser shaft can be detected. The reason? Because some of the trichlorethylene in the air filter will go into the engine and through the combustion chamber into the exhaust.



"Well now, settle down, boss—you told me to put in a supply."

STATEMENT REQUIRED BY THE ACT OF AUGUST 24, 1912, AS AMENDED BY THE ACTS OF MARCH 3, 1933, JULY 2, 1946 AND JUNE 11, 1960 (74 STAT. 208) SHOWING THE OWNERSHIP, MANAGEMENT, AND CIRCULATION OF CHILTON'S MOTOR AGE, published monthly at Philadelphia 39, Pa. for October, 1960.

1. The names and addresses of the publisher, editor, managing editor, and business managers are: Publisher, Russell W. Case, Jr., Ridley Creek Road, Media, Pa. Editor, Frank P. Tighe, 1017 Drexel Avenue, Drexel Hill, Pa. Managing Editor, William H. Wolfe, 517 Bradford Road, Oreland, Pa. Business Manager, Russell W. Case Jr., Ridley Creek Road, Media, Pa.

2. The owner is: (If owned by a corporation, its name and address must be stated and also immediately thereunder the names and addresses of stockholders owning or holding 1 percent or more of total amount of stock. If not owned by a corporation, the names and addresses of the individual owners must be given. If owned by a partnership or other unincorporated firm, its name and address, as well as that of each individual member, must be given.) Chilton Company, Chestnut and 56th Sts., Philadelphia 39, Pa.

Holders of more than 1 per cent of the capital stock outstanding of Chilton Company: Mary M. Acton, 260 Sycamore Avenue, Merion Station, Pa.; Mrs. Beulah Fahrendorf, Chateau LaFayette, Scarsdale, New York; Dorothy S. Johnson, Route 1, Putnam Valley, New York; Kimberton Hills Farms, Inc., 1608 Walnut Street, Philadelphia, Pa.; Mabel P. Myrin, 1608 Walnut Street, Philadelphia, Pa.; Mary M. Acton, Surviving Trustee U/W/O Clarence A. Musselman, Dec'd, c/o R. F. Irwin, Jr., 2318 Packard Bldg., Philadelphia, Pa.; Beneficiaries, Mary M. Acton and David Acton; J. Howard Pew, 1608 Walnut Street, Philadelphia, Pa.; J. N. Pew, Jr., 1608 Walnut Street, Philadelphia, Pa.; Mary Ethel Pew, 1608 Walnut Street, Philadelphia, Pa.; Alberta C. Sly, 415 East 52nd Street, New York 23, New York; Alberta C. Sly, Executrix U/W/O Frederick S. Sly, Dec'd, 415 East 52nd Street, New York, New York; Beneficiaries Albert C. Sly, Alberta C. Sly, and John E. Sly; Soleil Farms, Inc. 1608 Walnut Street, Philadelphia, Pa.; Charlotte M. Terhune, 160 E. 48th Street, New York; Steere & Company, c/o Girard Trust Corn Exchange Bank, Philadelphia 2, Penna.

3. The known bondholders, mortgagees, and other security holders owning or holding 1 per cent or more of total amount of bonds, mortgages, or other securities are: (If there are none, so state.) None.

4. Paragraphs 2 and 3 include, in cases where the stockholder or security holder appears upon the books of the company as trustee or in any other fiduciary relation, the name of the person or corporation for whom such trustee is acting; also the statements in the two paragraphs show the affiant's full knowledge and belief as to the circumstances and conditions under which stockholders and security holders who do not appear upon the books of the company as trustees, hold stock and securities in a capacity other than that of a bona fide owner.

5. The average number of copies of each issue of this publication sold or distributed, through the mails or otherwise, to paid subscribers, during the 12 months preceding the date shown above was: (This information is required by the act of June 11, 1960 to be included in all statements regardless of frequency of issue.) 67,098.

(Signature of publisher) R. W. Case, Jr.

Sworn to and subscribed before me this 21st day of September, 1960.

PHILIP J. SHIRE, JR.

(My commission expires January 7, 1963)
(SEAL)



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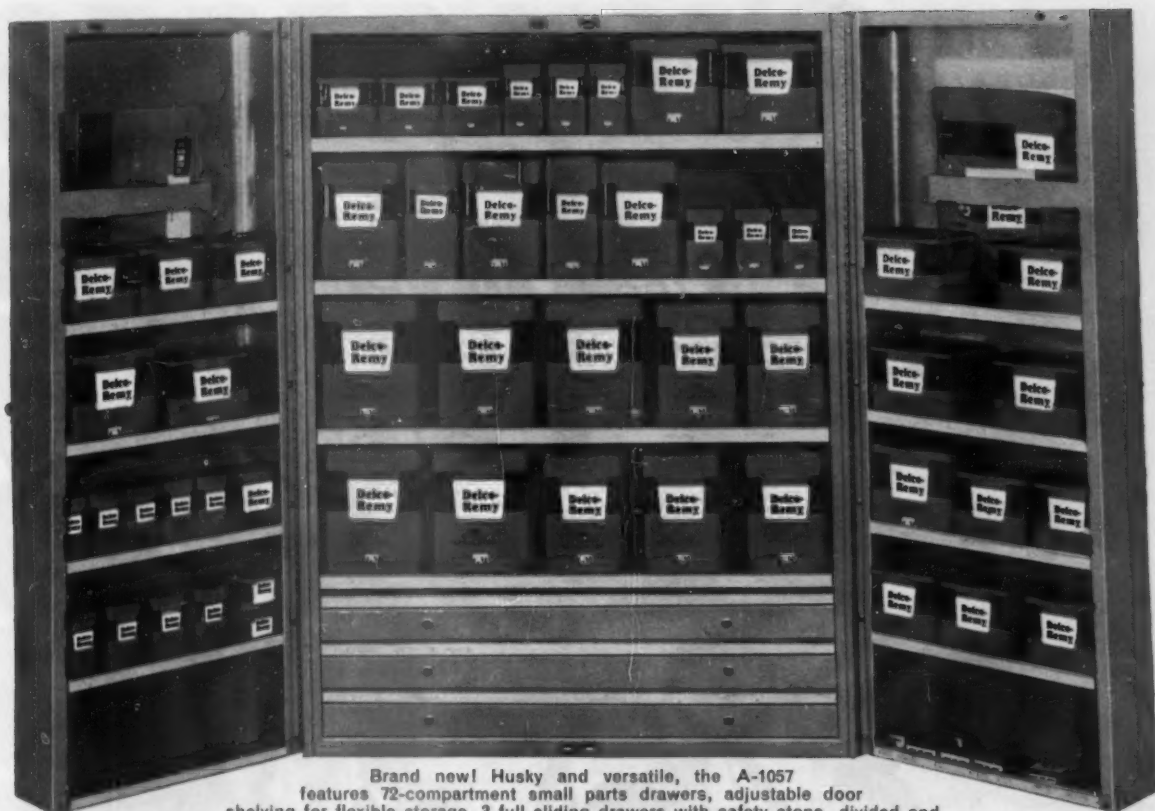
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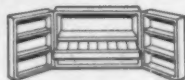
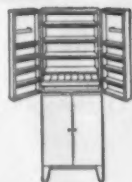


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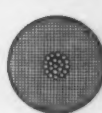
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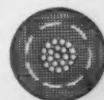


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"Live Wire" Division of General Motors

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But, wow—
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"Sure looks like the big Buick." "Look at the beautiful upholstery!" "You'd never guess it's a smaller car — it's so beautifully scaled." These are just a few of the raves dealers report about the Special. And they say that when folks get the feel behind the wheel — wow! — how the buying temperature soars!

The reason? The Special's no "compromise car"

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In short, the Special is a *Buick* — in room, in ride, in go, in pride. And, the public is eating it up!



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Provides infinitely variable speed control, higher torque
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JUST \$71.35 **COMPLETE**
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including two 1/2" drive
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Also available, as an optional extra, this sturdy metal tool box ... specially designed to carry the impact wrench and sockets, plus the McCord air gun and chisels. Price, \$4.60.

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FOR 1961

1 RAMBLER AMERICAN

The Economy Compact

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2 RAMBLER CLASSIC 6 and V-8

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Only Rambler Classic gives you the Best of Both: big car room and comfort . . . compact car economy and handling ease. Choose from two great engines—America's only Die-Cast Aluminum Six—or high performance V-8.

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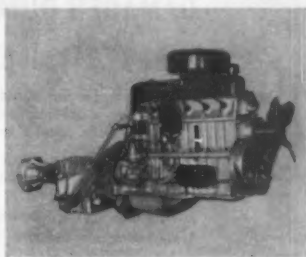


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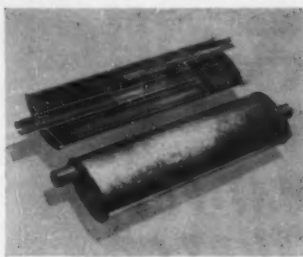


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Deadens road noises by at least 30%. Increases headroom. Insulates against summer heat and winter cold. Permanently shaped for perfect fit. Standard on 1961 Rambler Classic and Ambassador models.



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**NEW RAMBLER AMERICAN
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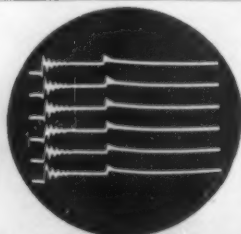


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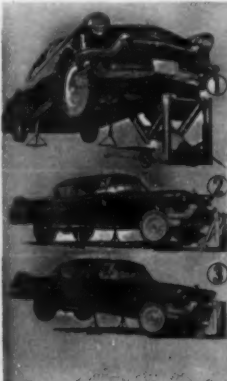
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Lifts all cars by center plate between the A-frame or any stable cross member. Small... easy to handle. About 4' long... stores in 29 sq. inches.

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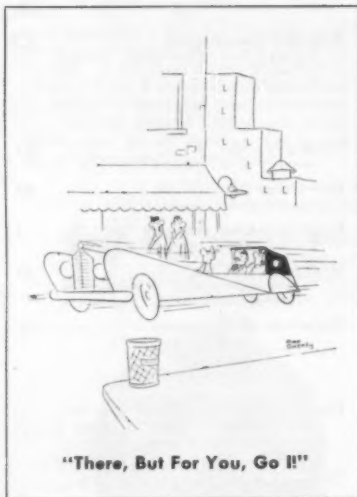
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A		Fram Corp. 81		P	
AC Spark Plug Div.	65 thru 69	Agency—McCann-Marschalk Co.		Packard Electric Div.	105
Agency—D. P. Brother & Co., Inc.		G		Agency—Campbell-Ewald Co.	
Albertson & Co., Inc.	26	Gabriel Co.	72	Pennzoil	10
Agency—Stevenson & Associates		Agency—Gray & Rogers Advg.		Agency—Fuller & Smith & Ross, Inc.	
Aluminum Industries, Inc.	8-9	Gates Rubber Co.	3rd Cover	Perfect Circle Corp.	2nd Cover
Agency—Applegate Advg. Agency, Inc.		Agency—Harold Walter Clark, Inc.		Agency—Compton Advg., Inc.	
American Brakelok Div.	85	General Electric Co.	18	Permatex Chemical Products, Inc.	102
Agency—Allman Co., Inc.		Agency—Batten, Barton, Durstine & Osborn, Inc.		Agency—De Garmo, Inc.	
American Motors Corp.	108-109	General Motors Corp.	27	Porter Co., Inc., H. K., Thermoid Div.	Back Cover
Agency—Geyer, Morey, Madden & Ballard, Inc.		Agency—Campbell-Ewald Co.		Agency—Erwin Wasey, Ruthrauff & Ryan, Inc.	
American Telephone & Telegraph Co.	79	H		Purolator Products, Inc.	4
Agency—Cunningham & Walsh, Inc.		Hall-Toledo, Inc.	78	Agency—J. Walter Thompson Co.	
Armstrong-Victor Div.	6	Agency—Slayton-Racine, Inc.		R	
Agency—Buchen Co.		Hanson Co., Harvey E.	84	Radiator Specialty Co.	102
Automotive Equipment Mfg. Co.	110	Agency—J. H. Kennedy Advg.		Agency—Alan Advertising Agency, Inc.	
Agency—Mays & Co.		Heli-Coil Corp.	110	S	
B		Heller Tool Co.	71	Schrader's Son, A.	77
Black & Decker Mfg. Co.	13	Agency—Chambers, Wiswell, Shattuck, Clifford & McMillan, Inc.		Agency—G. M. Basford Co.	
Agency—Van Sant, Dugdale & Co., Inc.		Herbrand Tools	94	Skil Corp.	83
Agency—Slayton-Racine, Inc.		I		Agency—Fuller, Smith & Ross, Inc.	
Bosch Corp., Robert	15	Ideal Corp.	96	Standard Motor Products Inc.	1
Agency—E. T. Howard Co., Inc.		Agency—RAF Advertising, Inc.		Agency—Friend, Reiss Advg., Inc.	
Breeze Corp., Inc.	28	Ingersoll-Rand Co.	29	Stant Mfg. Co., Inc.	89
Agency—Adams & Keyes, Inc.		Agency—Beaumont, Heller & Sperling, Inc.		Agency—Associated Advertising Agency, Inc.	
Buick Motor Div.	106	Inland Mfg. Co.	91	Statement of Ownership	102
Agency—McCann-Erickson, Inc.		Agency—Buchanan-Thomas, Inc.		T	
C		J		Thermoid Div., H. K. Porter Co., Inc.	Back Cover
Champion Spark Plug Co.	30-31	Jack-Pack Mfg. Co.	110	Agency—Erwin Wasey, Ruthrauff & Ryan, Inc.	
Agency—J. Walter Thompson Co.		Agency—Parker Advg.		Thompson-Ramo-Wooldridge, Inc.	3
Chevrolet Motor Div.	101	K		Replacement Div.	
Agency—Campbell-Ewald Co.		K-D Mfg. Co.	90	Agency—Griswold-Bushman Co.	
Chrysler Motors Corp., Mopar Div.	11	Agency—Andes Adv. Agency, Inc.		Tranco Industries, Inc.	76
Agency—N. W. Ayer & Son, Inc.		Ken Tool Mfg. Co.	80	Agency—Atlantic Bernstein Associates	
Clevite Corp.	22	Agency—Norman Malone Assoc.		Tung-Sol Electric, Inc., Automotive Products Div.	12
Agency—Duffy, McClure & Wilder, Inc.		L		Agency—E. M. Freytag Assoc., Inc.	
Commercial Credit Corp.	2	Legvold Enterprises, Inc.	88	Tungsten Contact Mfg. Co., Inc.	100
Agency—Van Sant, Dugdale & Co., Inc.		Agency—Thomas Moody & Associates		Agency—The Furman Co., Inc.	
D		Lucas Electrical Services, Inc.	86	U	
Delco Moraine Div., G. M. Corp.	73	Agency—McCarty Co.		United Motors Service Div., G. M. Corp.	14, 103
Agency—Campbell-Ewald Co.		M		Agency—Campbell-Ewald Co.	
Delco-Remy Div., G. M. Corp.	92-93	McCord Corp.	107	V	
Agency—Campbell-Ewald Co.		Agency—Gray & Kilgore, Inc.		Victor Mfg. & Gasket Co.	6
Ditzler Color Div., Pittsburgh Plate Glass Co.	19	Monroe Auto Equipment Co.	98-99	Agency—Buchen Co.	
Agency—Mazon, Inc.		Agency—Autkin-Kynett Co.		W	
Doan Mfg. Co.	82	Mopar Div., Chrysler Motors Corp.	11	Wagner Electric Corp.	16-17
Agency—William Glaser Advg.		Agency—N. W. Ayer & Son, Inc.		Agency—Arthur R. Mogge, Inc.	
Dow Corning Corp.	23	N		Weatherhead Co.	87
Agency—Church & Gusevite Advg., Inc.		New Britain Machine Co.	7	Agency—Carlson & Co., Inc.	
Du Mont Laboratories, Inc., Allen B.	110	Agency—Humbert Jones, Inc.		Weaver Mfg. Co.	95
Agency—Lescarboura Advg., Inc.		Newnan Machine Co.	102	Agency—Clark & Roberts, Inc.	
E		Agency—Gordon Schonfarber & Assoc., Inc.		Wilkening Mfg. Co.	32
Eis Automotive Corp.	97	O		Agency—Autkin-Kynett Co.	
Agency—The Furman Co., Inc.		Oldsmobile Div.	104	111	
Electric Autolite Co.		Agency—D. P. Brothers & Co., Inc.			
Spark Plugs Div.	24-25, 74-75				
Agency—Grant Advg., Inc.					
F					
Ford Motor Co.					
Parts & Service Div.	20-21				
Agency—J. Walter Thompson Co.					

THE LAST



LAFF



Two secretaries who worked in a car dealership were chatting during the coffee break. The blonde spoke to the redhead: "My boy friend and I are having a slight disagreement. I'm holding out for a big wedding but he wants to break the engagement!"

Mechanic: "May I have the afternoon off to go shopping with my wife?"

Service Manager: "I'm afraid not."

Mechanic: "Good. I can't thank you enough."

Definition of vision: Something we have after we find out that we guessed correctly.

A man stood on a busy street corner waiting for the traffic to slacken so he could cross. But the cars continued to roar by without pause. Finally, he spotted a fellow pedestrian on the other side of the street. "How did you get across?" he yelled.

The answer floated back: "I was born over here!"

Wife to mechanic-husband while out on a Sunday drive: "Slow up a bit, dear. That nice-looking policeman who's been following us wants to pass."

Doctor: "This peculiar behavior you mention about your son, after all isn't it a matter of heredity?"

Proud Mama: "Certainly not! There's never been the slightest trace of heredity in our family."

Definition of a pedestrian: A person who is both a husband and father and didn't think the family needed two cars.



Small-town garage 'racks up' big-city sales:

50 to 75 belts a month by checking every belt!

**Ferde Bosch, Owner
F & G Service
Casselton, North Dakota, says**

"Although we're located in a very small town off Interstate Highway 94, we average 50 to 75 belt sales a month! We do this by checking every belt on every car coming into our garage. When we find a bad belt our complete stock of Gates Belts means a sure sale and a happy customer.

"Gates Belts are tops in quality and the Gates Catalog and Dial Finder make it easy to find and install the right belt in a matter of minutes.

"We find that we get a large coverage of popular cars with a minimum investment, and as a profit maker, the Gates Belt is the one at the top!"

Start Making More Profit—TODAY—on Fan Belts!

Call your nearby Gates Supplier and tell him you want to "go" Gates. *At no cost to you*, he will have a factory-trained Gates Representative install attractive belt racks, clean up your stock, provide Catalogs and a Belt Finder and give you tested methods that boost belt sales. He will also help you get your stock in shape for maximum profits without loss of one penny on present stock.

**The Gates Rubber Company
Denver Colorado**



World's Largest Maker of V-Belts



To find belt wear always turn belt over — The underside of the belt... not the top... tells the true condition of the belt.

**REPLACE BELTS
LIKE THESE:**

CRACKED



GREASY



GLAZED



PEELING



SPLIT

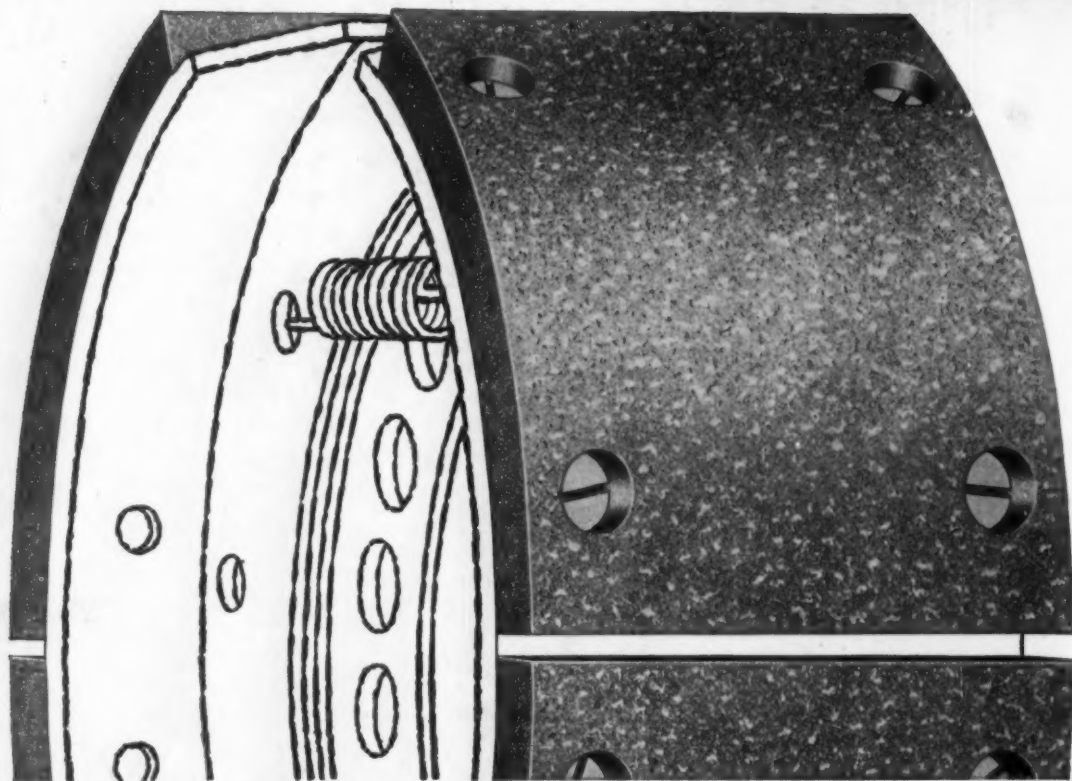


Gates Vulco V-Belts

TPA920

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"Portoblocks" are specially designed for use on rigs where tough operation is not critical. Yet these new brake blocks, produced by Thermoid quality manufacturing methods, are far superior to conventional economy priced brands. They provide even better stopping and better service than some "so-called" first-grade blocks selling at far higher prices.

In fact, "Portoblocks" are made and finished to the same precision standards as Thermoid's first-line "Pressure-Forged" blocks.

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Thermoid Distributor or write *Thermoid Division, H. K. Porter Company, Inc., 200 Whitehead Road, Trenton 6, New Jersey.*

New "Portoblocks" have:

- Safe stopping ability
- Excellent resistance to fade
- High-grade materials, including brass chips
- Precision ground for exact fit
- No-squeal construction

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